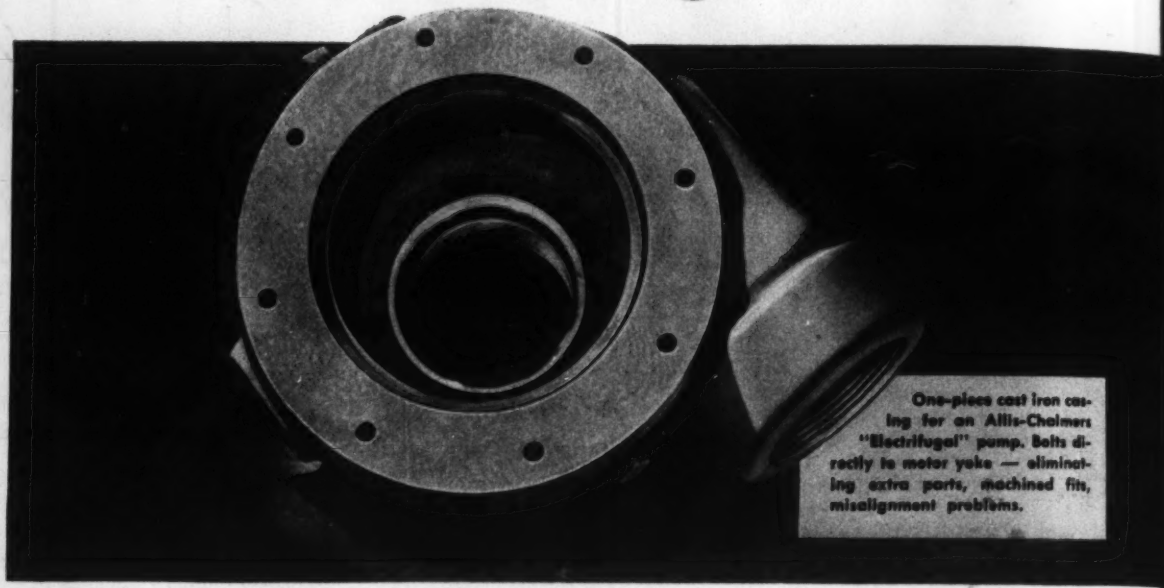
ENGINEERING NEWS-RECORD

nstruction equipment moves over new Alaska R.R. between Whittier and Anchorage.

[PUMP TIPS FROM ALLIS-CHALMERS—ONE IN A SERIES]

How to make CASINGS Last Longer . . .



One-piece cast iron casing for an Allis-Chalmers "Electrifugal" pump. Bolts directly to motor yoke — eliminating extra parts, machined fits, misalignment problems.

ABRASION AND CHEMICAL REACTION are the major causes of casing wear. For if liquid is gritty, or contains foreign matter; or casing is not constructed of the right materials for the pumping service required — casing life is materially shortened. A minor cause of direct casing wear is misalignment.

Original engineering of a pump can help prevent this wear. For example, Allis-Chalmers "Electrifugal" pump minimizes trouble from these sources in two ways: 1 — casings can be supplied in iron, bronze, stainless steel or other materials — depending upon type of service. 2 — It is a *unit-design* pump. Both impeller and motor are mounted on *one* shaft and in *one* frame. This means fewer parts, fewer fits — no chance for misalignment.

However, regardless of pump design, scheduled maintenance is still necessary if you expect to get longest wear from your casings. Some ways to do it . . .

▶ Check all piping supports regularly to see that they're effectively supporting the load.

▶ Every 6 months check piping itself to see whether it has shifted in any manner. Disconnect suction and discharge piping to see if it springs in any direction. Check the alignment of pump and motor — shimming up units as required.

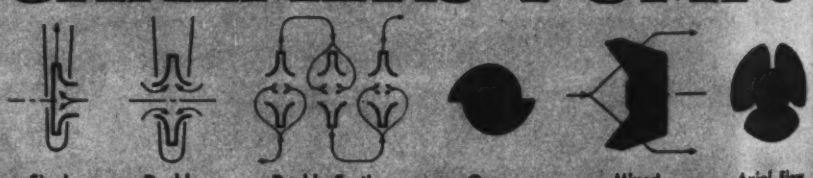
▶ Once a year clean and inspect casing for wear, deposits or pitting. Make necessary repairs.

▶ If foreign matter is being sucked into pump, wearing casing unduly, provide the intake end of suction piping with a suitable screen.

▶ Send for your *free* copy of "Handbook for Wartime Care of Centrifugal Pumps". This valuable booklet applies to *all makes* of pumps; contains *no* advertising. ALLIS-CHALMERS MFG. CO., MILWAUKEE 1, WIS. A 1755

ALLIS-CHALMERS PUMPS

Allis-Chalmers builds all types and variations of pumps shown at right. Capacities from 10 to 150,000 gpm—heads to 2500 lbs.



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The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • SEPTEMBER 28, 1944 • VOLUME 133 • NUMBER 13

Missouri Valley Authority proposed by President

Coordinated development of the Missouri River basin recommended to Congress to be carried out by an agency similar to the TVA.

As Congress on Sept. 21 was about to begin its November election recess, President Roosevelt sent a message to the Hill recommending the establishment of a Missouri Valley Authority, patterned after the authority established in the Tennessee valley in 1933. At the same time he reiterated earlier requests that consideration be given to the creation of similar authorities for the Arkansas and Columbia River basins. A number of bills for creation of a Missouri Valley Authority were pending in Congress at the time the President expressed his views.

Mr. Roosevelt based his recommendation on a resolution, which he attached to his message, that had been adopted by the governors of eight of the nine Missouri River basin states and by members of the Missour River States Committee at a meeting held last month in Omaha, Neb. In doing so, he referred to those portions of the resolution that ask that "it be recognized that we are dealing with one river and one problem," that "there can be no piecemeal legislative program," and that there must be an overall comprehensive plan . . ."

Proposal of the governors

The President in his message inferred that the resolution advocated creation of a Missouri Valley Authority. As a matter of fact, however, the resolution makes no reference whatsoever to the authority idea, either directly or by inference. Instead, it clearly indicates that the governors anticipate that the river's resources should be developed through coordination of the operation of the Corps of Engineers and the Bureau of Reclamation. The resolution calls on the President and Congress to direct these two agencies "to bring before the Congress a coordinated plan, based upon the proposed legislation and official documents heretofore mentioned [the omnibus flood-control bill, as it concerns the Missouri River, and Senate Document 191, which contains the bureau's plan for the basin] which will make possible the authorization by the Congress, now, of the Missouri River basin development program in its entirety by such amendments to legislation now pending as are feasible from the standpoint of legislative procedures."

No basic differences

In discussions of the proposals made by the Corps of Engineers and the Bureau of Reclamation for development of the Missouri River, representatives of both agencies have pointed out that the differences between their plans can be ironed out. However, the two agencies

(*Continued on page* 13)

Pontoon swing span converted to fixed bridge

By raising this old pontoon-supported swing bridge 11 ft. and moving it 39 ft. downstream, the City of Chicago, Department of Public Works, improved navigation on the Calumet River and, at the same time, provided a temporary bridge in anticipation of early postwar construction of a new fixed bridge over the river at 130th St.

The 103-ft. long, 20-ft. roadway, 135-ton truss span was raised by successively dewatering and refilling the center compartment of the old pontoon barge to make it function as a hydraulic lifting device. Truss ends were lifted alternately in 3-ft. stages, using two lifts. Timber cribbing was built up on the deck of the ponton barge as lifting continued, while other cribbing was added under the truss ends to support them.

After the old truss had been raised to a 17-ft. clearance above the river it was moved to its new location in 35 min. One large barge near mid-stream supported most of the weight, while the old pontoon barge carried the far end and kept the span balanced.

Press Association Photos.

Yank engineers clear Siegfried Line barriers

Heavy reinforced concrete "Dragon Teeth" and steel I-beam barricades, designed to hinder mobile forces of the Allied armies, were found along the Siegfried Line when the break-through was made near Aachen inside the German border.

It was necessary for U. S. engineers to resort to blasting in order to up-root the concrete obstructions, while the steel I-beams driven in soft ground (instead of being encased in concrete) are being removed by hand labor without much apparent effort.

Detroit access highways approved by state board

A joint agreement among the Michigan State Highway Department, the city of Detroit and the Wayne County Road Commission to finance postwar construction of limited access highways in Detroit was approved Sept. 19 by the State Administrative Board.

The agreement provides that the state highway department will contribute $3,000,000 annually for this purpose, with the city and the county road commission each adding $1,500,000 to the fund every year. To this total of $6,000,000 annually will be added whatever federal aid money may become available as a result of future legislation.

First construction, under the agreement, must be on Section 1 of the Detroit Crosstown Expressway (extending easterly from the easterly end of the Detroit Industrial Expressway to and including its intersection with the John C. Lodge Highway, and Section 1 of the John C. Lodge Highway (extending northerly from its southerly terminus at Jefferson Ave. near Second Ave. to and including its intersection with the Detroit Crosstown Highway). All engineering and construction on the crosstown expressway will be done by the state highway department; all such work on the Lodge highway will be done by Wayne County as agent for the state.

Reconversion bill aids public works financing

The reconversion bill, now awaiting action by the President, authorizes "loans or advances" in an unspecified total amount to the states and their political subdivisions to be used for engineering and architectural plans and economic investigations for public works, exclusive of housing. Funds authorized by the bill, S 2051, would be allotted by the Federal Works Administrator among the states, 90 percent on a basis of population, and 10 percent according to the discretion of the administrator. The latter provision leaves some funds for special needs and contingencies.

Projects must conform to plan

Allotments would be made only for design of projects that conform to and are a part of an over-all state or local public works plan.

Loans are to be repaid to the federal government only if and when construction of the project is undertaken. An earlier version of the bill provided for 2½ percent interest, with repayment of the loan not later than five years after the loan was made. Though the final version omits the interest provision there is nothing to prevent such a stipulation by the Federal Works Administrator, who is charged with making regulations. The bill also omits any mention of the matching of federal with state funds.

Advance plans expedited

The fact that no specific total amount is at this time authorized is looked upon as a way of notifying the states that this is purely a measure to expedite advance designs and specifications for essential projects, and that no repetition of the PWA is in the offing. This is emphasized by the provision referred to above that funds shall be made available only for projects which conform to over-all state or local plans.

The portion of the bill relating to federal loans for state and local public works planning corresponds in many respects to provisions of a bill suggested last January and advocated since that time by the Committee on Postwar Construction of the American Society of Civil Engineers.

Loan provisions of the Reconversion Act would terminate June 30, 1947.

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Current practices and trends stressed at New England waterworks meeting

Poland Springs meeting advised to file applications for priorities now, in preparation for WPB control relaxations after X-Day.

Highlight of the sixty-third annual meeting of the New England Water Works Association, held at Poland Springs, Me., last week, was a symposium on present practice and trends in various phases of the waterworks field, designed to aid in the planning now being done by the Association's members under the "Blueprint Now" policy adopted at the 1943 meeting (*ENR*, Oct. 7, 1943, vol. p. 510). Registered members and guests numbered 400 at this third annual meeting during wartime.

The association was welcomed by Frank E. Southard, chairman of the Maine Public Utilities Commission (one of the few state commissions having jurisdiction over public water systems), who paid tribute to the unrewarded service of water utilities men by saying, "I think it is by reason of their perfection that water utilities are lacking in that modern thing called glamour. We have been so accustomed to regular, efficient and non-interrupted service from water utilities that we cannot comprehend just what a cessation or failure of that service could mean. No praise for efficiency flies from your mast-head. No, you must be content to fly the Glory and know in your hearts that you, too, have made a real contribution and will collect your reward in heaven."

Arthur E. Gorman, director of the water division of the Office of War Utilities, War Production Board, warned of the possibility of delivery delays of material and equipment for maintenance and necessary construction work should the war in Europe end suddenly and WPB restrictions be withdrawn on these classes of supplies. He said, "Relaxation of WPB orders and controls are likely to take place promptly after X-Day. It is quite obvious that there will be a continuing system of controls which will assure production for war purposes. This will probably be in the form of a high priority rating band. Some provision will be made to assure utilities and other essential civilian services material and equipment necessary to meet operating emergencies, but utilities should be realistic about the effect of the relaxations and appreciate the fact that the favorable position they have held under WPB war controls compared with the rapid economic system probably will not continue. They must be prepared to compete with others for materials and manpower which are available under the post-X-Day and postwar economic situation. For these reasons water utilities with problems involving equipment should have plans ready for their maintenance, rehabilitation, and expansion programs and be alert to their current opportunities as well as their continuing responsibilities. By all means, they should file applications early for projects needed to firm supply in 1945."

Thomas R. Camp, sanitary engineer, Boston, Mass., and associate professor of sanitary engineering, Massachusetts Institute of Technology, was presented the Dexter Brackett Memorial medal for his paper "Hydraulics of Distribution Systems—Some Recent Developments in Methods of Analysis" (See *ENR*, Oct. 7, 1943, vol. p. 510). Honorable mention was given G. A. McCarthy and W. E. Cassidy for their paper "Viability of Bacteria in Presence of Phosphates."

Karl R. Kennison, chief engineer of the Metropolitan Water Supply Commission, Boston, Mass., was elected president of the association for the coming year and Arthur L. Shaw, was chosen a vice president. Sidney S. Anthony, superintendent and engineer of the Augusta, Me., Water District was selected to fill the vacancy created by the death of Director-Elect Samuel M. Ellsworth (*ENR*, Aug. 24, vol. p. 209).

Harold W. Griswold, deputy manager and deputy chief engineer of the Hartford, Conn., Metropolitan Water District, continues as a vice president, and Frank J. Gifford as secretary and treasurer.

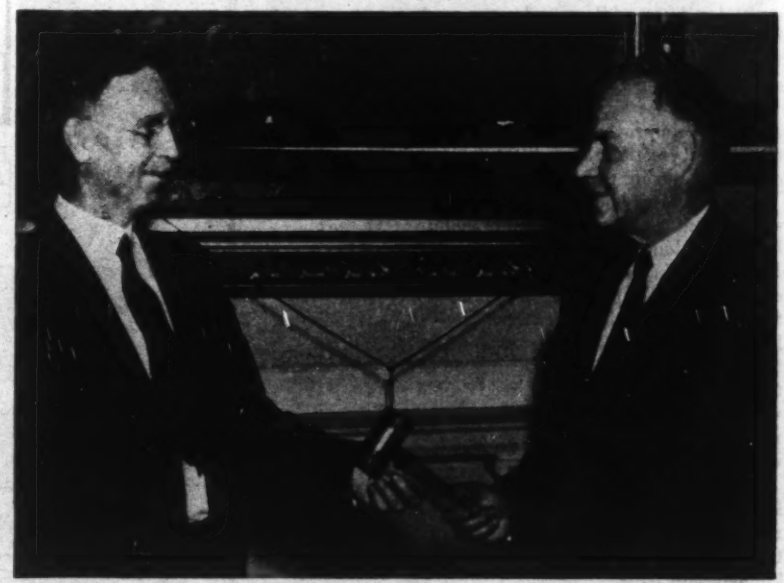
Arthur G. Weston, a past president and chief engineer of the Massachusetts state department of public works was elected an honorary member of the New England waterworks group.

Symposium on waterworks trends

Papers were presented by outstanding members of the association on the trends in such fields of waterworks as ground water supplies, filtration, chlorination, distribution piping systems, pumping station equipment, standpipes and elevated tanks, financing, office practice and emergency repair organization.

Ralph W. Horne, of Fay, Spofford and Thorndike, Boston, Mass., in discussing ground water supplies pointed out that prior to 1910 no installation of gravel-packed wells had been made in New England, but since that year there have been 70 separate installations. During the same period there were 141 installa-

(*Continued on page* 10)



Horace L. Clark, right, retiring president of the New England Water Works Association, turns the gavel over to Karl R. Kennison, incoming president. Mr. Clark is superintendent and general manager of the Sanford, Me., Water District; Mr. Kennison, chief engineer of the Boston Metropolitan District Water Supply Commission.

Fig. 1. Mobile units assembled and ready for occupancy in Detroit war-housing project.

Expansible Mobile Unit for Detroit Housing

By erecting 285 single-family mobile dwellings in Detroit in 37 working days, the Federal Public Housing Authority has shown noteworthy speed in production of housing for war workers in critical areas.

Cunningham-Rudy Co., Detroit contractors, started erecting houses on June 9, and 18 days later 12 families moved into the first completed dwellings. Almost daily from then until completion of the last house on July 22, new units were turned over to the Detroit Housing Commission which rents and manages the houses for FPHA. So urgent was the housing need that families leased some dwellings while foundations were being installed, and completed houses were often occupied the day after acceptance by the commission.

The contract price of $860,000 included site improvements, and transportation and erection, as well as the cost of manufacturing the units themselves.

This speed in housing production resulted from use of an expansible mobile house developed by technicians on the FPHA staff in Cleveland, and engineers of the Palace Corp., Flint, Mich., manufacturers of the houses. Each house, large enough for a family of four or five, was completely fabricated in a factory and trucked to the erection site where brick or pile foundations were ready to receive it and utility services were ready for connection.

Overall size is 22 ft. 6 in. x 24 ft. 8 in., with the 10 ft. 9 in. x 12 ft. living room being the largest of the rooms. Other rooms are two bedrooms, dinette, kitchen, and bath.

On leaving the factory, each house formed a shipping case that enclosed, in place for use, the kitchen with its equipment of oil-burning range, sink, cupboards, and icebox; bathroom with stall shower, lavatory, and toilet; oil-burning space heater, clothes closet and all the plumbing and electric wiring. The houses are insulated throughout and have given satisfactory service when tested in windy below-zero weather and desert heat of 120 degrees.

At the site the sides of the shipping case were raised to form the roof, and the walls and floors for two bedroom

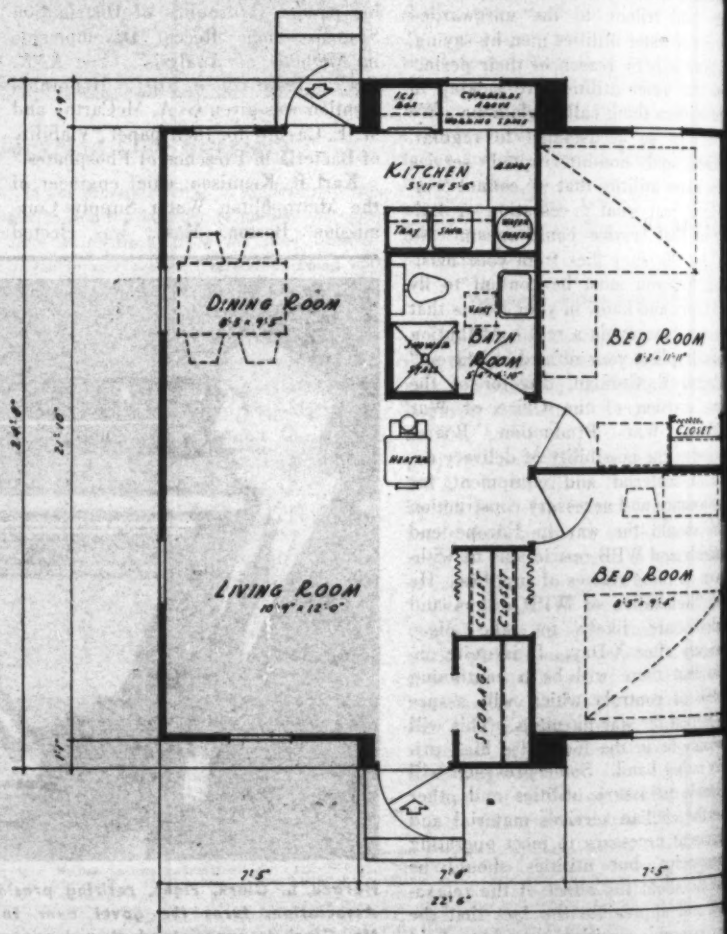


Fig. 2. Plan of unfolded house. Center section forms basic unit including fully equipped bathroom and kitchen with heating, plumbing and electric systems.

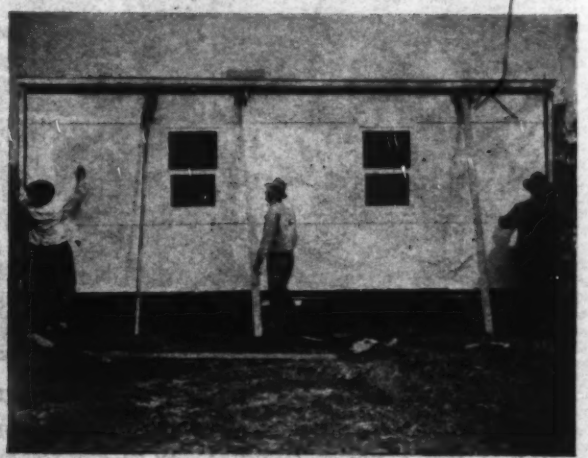
Fig. 3. Arriving at the site by trailer truck, the house is lowered to the foundation by jacks or crane.

d the living room were swung out
m the interior, the whole shaping
o a complete one-story dwelling
hin a few hours.

This type of house was developed for
on vacant city lots where utilities
available, thus eliminating the
essity of constructing streets, sewers,
ter mains and electric service; saving
ical materials, time and money. Lots
leased and the houses will be re-
ved by the Federal Public Housing
thority when war-time need for them
minates. Their mobility permits their
nsfer from one location to another to
et shifting housing needs in relation
war schedules.

To achieve speed in opening houses
families, the Detroit Public Works
artment kept crews of men avail-
to turn water into the houses and
Detroit Edison Company performed
milar service to provide electricity.

Fig. 4. Roof section of wing raised and braced for swinging out living room end walls.



*5. Living room floor is lowered into place (left) with sidewall resting on it. Note lighting fixtures and oil-burning
er in place. At right, sidewall is being raised into position. All elements are hinged or bolted together. Two
rooms occupy similar wing on opposite side of center section.*

A.R.B.A. to sponsor training for engineers from South America

Highway engineers to be brought to this country for one year. Part of their time will be spent with highway departments and in plants of construction equipment manufacturers

The American Road Builders Association has been asked by the Office of the Coodinator of Inter-American Affairs to sponsor a highway training program for engineers and construction men from Latin American countries. Two classes of men are to be offered an opportunity to avail themselves of this training: Class A men are to be drawn from practicing highway engineers in South America who are graduates of a recognized school of engineering and who have had not less than four years of practical experience, and Class B men are to be drawn from practical highway construction men such as foremen, superintendents, plant managers and master mechanics of at least eight years practical experience.

Cost of the program

The training program is to be varied, depending upon the requirements of the applicants, but it is to include from one to three months in the plants of members of the Manufacturers Division of the A.R.B.A. who are expected to finance the A.R.B.A. share of the cost. The purpose of this is to make the South American engineers familiar with American construction equipment.

The total cost of this one-year of training each man has been set at $900, of which the principal item is $450 for the three-month initial training period following arrival in this country. Other items are for travel, administration and insurance. During nine months the student is expected to be engaged in practical field work with one of the highway departments or in plants of equipment manufacturers. Employers are expected to pay the students living expenses at a minimum rate of $125 a month in lieu of other compensation.

The Office of the Coordinator of Inter-American Affairs is to bear about one-third of the cost of training each student, and an appeal is being made to members of the Manufacturers Division of the A.R.B.A. for contributions to make up the balance.

A survey made by the A.R.B.A. indicates that 17 state highway departments and 55 construction machinery manufacturers will cooperate by making full-time or part-time positions available to the trainees.

Engineers in Latin America can obtain fuller details from local offices of the Coordinator of Inter-American Affairs or from the A.R.B.A.

Fleming now in Russia on postwar works study

On instructions from Preside Roosevelt, Maj. Gen. Philip Flemin administrator of the Federal Wor Agency, is in Russia to discuss wi Russian officials their plans for a po war public works program.

General Fleming plans to inspect first hand Russia's progress in rehabi tating her territory from the devastati caused by the German invasion. H will visit Leningrad and Stalingrad a hopes also to see the Donbas region.

General Fleming has already di cussed postwar public works plans wi British officials in London and Fren leaders in Paris.

• • •

Building wage increase allowed in St. Louis, Mo.

An increase of 5c. per hr. for gener building laborers employed on indu trial and commercial construction in S Louis and St. Louis County, Mo., ra ing the scale of such workers to $1 hour, has been approved by the Wa Adjustment Board of the Department Labor. The wage increase has been a cepted by the Master Builders' Assoc tion, representing most St. Louis co cerns in the construction field, and four locals of the International H Carriers, Building and Common Lab ers' Union. The prevailing scale 67½c. per hr. for laborers on housi construction has not been changed.

British Combine ph

New power for Alaska's newest railroad

A double-header of two 1,000-hp. diesel locomotives hauls a train of construction equipment over the new 12-mi. Portage-Whittier branch of The Alaska Railroad. This view shows the train approaching one of the two long tunnels on the branch built in 1943 for the Army Engineers to open up the new all-weather port of Whittier on Price William Sound. Extensive military supplies have passed through the new port and over the branch line to Anchorage and interior Alaska s the project was completed a year ago. 12-mi. cutoff eliminates 114 miles of h mountain grades between the old port Seward and Anchorage.

Illinois license law held unconstitutional

The Illinois State Supreme Court in a opinion handed down on Sept. 19 declared unconstitutional the entire state law for regulation of professional engineering practice, which was passed in 1941. The court held some provisions were "vague and uncertain" and that others unlawfully delegated legislative powers to the state department of registration and education.

The court affirmed the judgment of the Sangamon County Circuit Court, which had held the law unconstitutional and enjoining state officials from expending any state funds to administer the act, (*ENR* Oct. 21, 1943, p. 582). The suit was brought by Arthur H. Krebs, a Springfield manufacturer, at the request of architects of Illinois.

• • •

Gen. Tyler to continue Mississippi River work

Although he reached the statutory retirement age on Sept. 25, Brig. Gen. Max C. Tyler, president of the Mississippi River Commission since 1940, will continue on active duty status in that capacity.

By direction of President Roosevelt and on recommendation of Maj. Gen. Eugene Reybold, Chief of Army Engineers, War Department orders to that effect have been issued and there will be no interruption in General Tyler's direction of flood control activities in the Mississippi Valley.

General Tyler's headquarters are at Vicksburg, Miss. In addition to heading the River Commission, he is also division engineer of the Lower Mississippi Valley Division, composed of the Memphis, Vicksburg and New Orleans districts.

Among the larger projects being directed by General Tyler is construction at Clinton, Miss., of what will be the world's largest hydraulic model. An exact reproduction of the entire Mississippi River system, it will be used to study operations of the river system's many flood control dams and reservoirs.

General Tyler was graduated, fourth in his class, from West Point in 1903. During his more than 40 years as an officer of the Corps of Engineers he has had a great variety of assignments in the United States and its possessions. He was assistant to the Chief of Engineers during World War I and director general of military railways. His service in that post earned him the Distinguished Service Medal. Other assignments included that of department engineer of the Philippines from 1937 to 1939.

Federal aid for highways and streets in bill approved by the Senate

The U. S. Senate, before it recessed, approved the Hayden postwar highway bill (S. 2105) and sent it to the House, as reported in last week's issue. The Senate bill authorized an annual appropriation of $450,000,000 for each of the three fiscal years following the war.

The federal funds, except these spent on grade-crossing elimination, must be matched by the states on a 50-50 basis. They are to be apportioned among the states according to the formulas given in last week's issue. Apportionment among the states for the three types of road work will be approximately that given in the accompanying table.

Of the total of $450,000,000, the sum of $200,000,000 is to be spent on federal-aid highway system outside of municipalities. It is to be apportioned among the states under the old federal-aid formula, ⅓ area, ⅓ population and ⅓ post-road mileage. An additional $125,000,000 is to be spent on the principal secondary roads and so-called feeder roads. This money is to be apportioned on the basis of ⅓ area, ⅓ rural population and ⅓ rural-delivery roads and "star routes". A special provision with respect to this money permits the populous states to spend it inside their municipalities if they so desire.

The remaining $125,000,000 is to be spent on those parts of the federal-aid highways that come within the corporate limits of municipalities of 5,000 population or over. This money is to be apportioned among the states in the ratio that the population of such urban communities bears to the urban population of the whole country.

Apportionment of the funds among the states will be about as shown in the accompanying table.

It should be noted that these amounts are not final as the bill has not been approved by the House.

State	Federal-aid Highways	Secondary Roads	Urban Highways	Total
Alabama	$4,187,000	$3,109,000	$1,310,000	$8,606,000
Arizona	2,873,000	1,863,000	264,000	5,000,000
Arkansas	3,427,000	2,586,000	561,000	6,574,000
California	8,010,000	4,298,000	8,166,000	20,474,000
Colorado	3,593,000	2,267,000	939,000	6,799,000
Connecticut	1,241,000	639,000	1,985,000	3,865,000
Delaware	975,000	609,000	205,000	1,789,000
Florida	2,873,000	1,804,000	1,608,000	6,285,000
Georgia	5,020,000	3,591,000	1,631,000	10,242,000
Idaho	2,472,000	1,621,000	213,000	4,306,000
Illinois	7,874,000	3,974,000	9,562,000	21,410,000
Indiana	4,806,000	3,021,000	3,082,000	10,909,000
Iowa	4,962,000	3,325,000	1,601,000	9,888,000
Kansas	5,037,000	3,315,000	1,113,000	9,465,000
Kentucky	3,734,000	2,836,000	1,307,000	7,877,000
Louisiana	2,987,000	2,098,000	1,540,000	6,625,000
Maine	1,732,000	1,170,000	564,000	3,466,000
Maryland	1,628,000	976,000	1,800,000	4,404,000
Massachusetts	2,615,000	655,000	6,649,000	9,919,000
Michigan	6,076,000	3,446,000	5,713,000	15,235,000
Minnesota	5,381,000	3,475,000	2,218,000	11,070,000
Mississippi	3,591,000	2,778,000	603,000	6,970,000
Missouri	5,922,000	3,803,000	3,168,000	12,893,000
Montana	4,041,000	2,589,000	309,000	6,939,000
Nebraska	3,982,000	2,635,000	787,000	7,404,000
Nevada	2,551,000	1,602,000	61,000	4,214,000
New Hampshire	975,000	609,000	478,000	2,062,000
New Jersey	2,546,000	808,000	5,558,000	8,972,000
New Mexico	3,129,000	2,096,000	259,000	5,584,000
New York	9,636,000	3,563,000	18,878,000	12,077,000
North Carolina	4,822,000	3,706,000	1,501,000	10,029,000
North Dakota	2,982,000	2,014,000	216,000	5,212,000
Ohio	7,026,000	3,881,000	7,581,000	18,488,000
Oklahoma	4,517,000	3,109,000	1,356,000	8,982,000
Oregon	3,315,000	2,121,000	815,000	6,251,000
Pennsylvania	8,172,000	4,396,000	10,574,000	23,142,000
Rhode Island	975,000	609,000	1,129,000	2,713,000
South Carolina	2,709,000	2,098,000	658,000	5,465,000
South Dakota	3,139,000	2,095,000	223,000	5,457,000
Tennessee	4,237,000	3,056,000	1,602,000	8,895,000
Texas	12,666,000	8,364,000	4,488,000	25,518,000
Utah	2,250,000	1,405,000	436,000	4,091,000
Vermont	975,000	609,000	187,000	1,771,000
Virginia	3,656,000	2,659,000	1,499,000	7,814,000
Washington	3,148,000	1,988,000	1,475,000	6,621,000
West Virginia	2,196,000	1,732,000	812,000	4,740,000
Wisconsin	4,814,000	3,057,000	2,669,000	10,540,000
Wyoming	2,488,000	1,583,000	134,000	4,205,000
Hawaii	975,000	609,000	396,000	1,980,000
District of Columbia	975,000	609,000	1,153,000	2,737,000
Puerto Rico	987,000	944,000	839,000	2,770,000
Administration	5,000,000	3,125,000	3,125,000	11,250,000

MEN AT WORK

Busily engaged in street maintenance and resurfacing at St. Louis, Mo., are these city officials (left to right): BUD SCHANAKER, foreman of the city's bituminous plant; CHAS. G. GILMORE, JR., assistant superintendent, bituminous section; JIM CALLAHAN, assistant superintendent, block paving section; FRANK HANLEY, superintendent, bituminous and block paving; and HENRY W. DAWSON, street commissioner.

Three oldtimers in the Polk County Engineers at Des Moines, Ia. Instrumentman JOHN P. McMANUS (left) has been with the county 21 years, Assistant Engineer O. K. FRINK (center) 25 years, and Bridge Engineer GLEN H. VOSS 15 years.

Rush work in preparing Fontana reservoir for filling by Nov. 1, is directed by L. M. RAGSDALE, center, and H. L. ELERDING, right, construction superintendent and assistant construction superintendent of the Construction & Maintenance Division of the Tennessee Valley Authority. At left is JOHN W. CLARK, assistant construction engineer at Fontana Dam.

Engineering activities of GEORGE R. THOMPSON, city engineer of Detroit for the past seven years' cover a wide variety of work including railroad, municipal and industrial construction, architectural consulting practice and a 6-year term as state budget director of Michigan.

F. E. TOOKSBURY (left), now assistant city engineer at Muscatine, Ia., has served that city 25 years, while I. V. HOWENSTINE (right) has held the office of city engineer 10 years.

Surplus property board created by new bill

There is no indication, in the surplus perty disposal bill which has been t to the White House for the Presi- 's signature, as to whether or not posal of construction equipment uld continue to be handled by Treas- y procurement as at present. The y comment that officials in the office E. P. Phillips, director of the con- ction equipment and farm ma- inery section, would make concerning bill is that they do not know what ct enactment would have on the ent setup, and that they are now y studying its several different pro- ions.

The bill provides that the President point three members to serve on a rplus property board for two years at salary of $12,000, and that he also signate the chairman. The board is thorized to hire industrial engineers d other experts. No provision is made ecting the organization of industral visory committees.

Government agencies give priority

Transfer of surplus property between vernment agencies is to be given iority over all other disposition, upon imbursement or transfer of funds. The ly case in which donation is author- d is where property has no com- ercial value.

Property can be either sold or leased states or non-profit institutions. No airport, harbor, or port terminal is to be disposed of until it is first offered for sale or lease to the state or municipality in which it is situated. No power line shall be sold or leased for more than a year, except to a federal or other government agency, or unless sale is specifically authorized by Congress, provided some government agency certifies it is needful as part of a public or cooperative power project.

In addition to the provision that "a fair price" be charged, to be determined with reference to the character of disposition, states and their political subdivisions are authorized "to purchase original rights-of-way on which highways or streets were established at a price not exceeding that paid therefor by the government."

The only stockpiling permitted by the government is that of "stragetic minerals and metals."

The act would not affect authority of commanders in active theaters of war with respect to property in their control. Otherwise, it is prohibited to import "surplus property sold abroad or for export."

Owning government agencies could dispose of "any public works construction or maintenance projects carried on by such agency."

Competitive bids would be required only "in a given case," where the board determined it would "better effectuate the policy of the act." The act would expire "three years following the cessation of hostilities in the present war."

More highway surveys let to private firms

Following the trend reported in our issue of Aug. 17, Vol. p. 190, more contracts for surveys and preparation of plans for postwar highway projects have been let by state highway departments to private engineering firms in order to speed the preparation of such plans.

A contract for preparation of a preliminary report on the best route for the Inter-Regional Highway through San Antonio, Tex., has been let by the Texas State Highway Department to Michael Baker, Jr., consulting engineer, Rochester, Pa. The contract was let late in August and calls for the work to be done within four months.

As noted in the Aug. 17 issue, two other firms already are engaged in similar work in Texas.

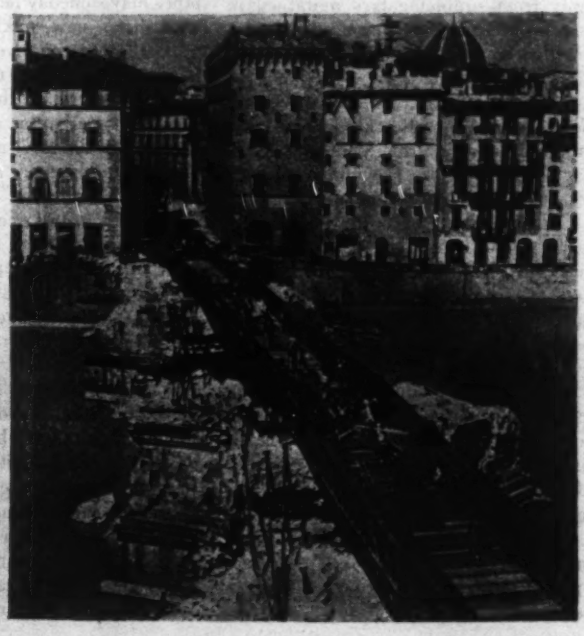
In Colorado the highway department has let a contract for a preliminary survey of the proposed Platte River Drive at Denver to the firm of Crocker & Ryan of Denver. Charles D. Vail, state highway engineer, at the time the contract was let stated that neither the city nor the State Highway Department had the staff to make such a survey.

A contract not included in our report of Aug. 17 is that of the firm of Gannett Fleming, Corddry and Carpenter of Harrisburg with the Pennsylvania Highway Department for surveys and detail designs for a 40-mi. superhighway in southwestern Pennsylvania, including a bridge over the Youghioghenny River.

Bailey trusses span rubble of wrecked bridges in France and Italy

Between Allied bombing and German demolition charges, bridges in the path of the European fighting have had only an outside chance to escape damage, but usually parts of the massive piers remain, and upon these piles of rubble Bailey military bridges are soon in place. The claim of our Ninth Air Force is that it bombed out of service the Seine River bridge between Rouen and Paris. The view at the left is one of these being rebuilt by British Royal Engineers.

The similar view at the right is of the Ponte S. Trinita in Florence, Italy, built in 1570 and notable for the graceful outline of its flat, elliptical arches—two of 86-ft. and one of 96-ft. span—and for the thickness of its piers—26 ft. Of all of Florence's Arno River bridges, only the famous Ponte Vecchio, next upstream from S. Trinita, was spared by the Germans.



New England waterworks meeting reviews trends

(*Continued from page* 3)

tions of tubular driven wells. However, since 1930 there have been 61 gravel-packed well installations as compared with 48 of the tubular type, and since 1940 the figures show 31 gravel-packed installations to only 16 of the tubular driven variety.

He also pointed out that while the methods of installing tubular driven wells have been well established for years, there have been marked advances in the method of determining the yield capacities of water bearing strata and fluctuations in ground storage. This has made it possible to determine more accurately the safe yield of potential ground water supplies and has led to the development of types of wells more capable of fully utiliing the available water resources, of which the gravel-packed well and th radial-process well are outstanding examples. The latter employs radial, horizontal perforated pipes to conduct water from the water-bearing stratum to a central sealed reinforced-concrete caisson or clear-well.

Filtration and chlorination

Filtration trends were discussed by E. Sherman Chase, consulting engineer of Boston, Mass., who said that considerable attention has lately been given to the design of basins, particularly with respect to inlets and outlets. Present tendency is to use coarser filter sands in view of the dependence being placed on pretreatment and upon chlorination for final disinfection, and the trend in filter washing, which for several years was away from supplementary agitation, is now towards such agitation. Filtration practice in New England is largely for the purpose of reducing color and for removing tastes and odors since most New England supplies are either from ground water or from ponds and impounding reservoirs providing water of reasonably safe and sanitary quality.

Chlorination trends were reviewed by A. E. Griffin, assistant director of Wallace and Tiernan Co's. technical service division, who cited the literature of the past five years in this field to call attention to the advances made in tests for chloramines and free chlorine residuals. He also called attention to the use of chlorine at the reservoir for the control of algae as well as bacteria, in line with recent emphasis on the quality of water in the distribution system, citing the "chlorine blanket" used at the Lake Ashburton reservoir of the Baltimore system. This "blanket" is developed in the reservoir through the application of chlorine at the inlet, chlorine residuals being maintained through all but the top few feet to destroy the algae. Previously persistent turbidity, tastes and odors have been thus overcome.

Maintenance of free chlorine residuals on top of filters greatly increased the filter runs. In addition, the claim is made that iron and manganese were oxidized so thoroughly that they could be easily removed on the filters.

Chlorine is also being used to condition sodium silicate for use as a filter aid. This is accomplished by passing chlorine into a dilute solution of sodium silicate, the reactions forming sodium hypochlorite and sodium chloride with the liberation of colloidal silica. In the process the chlorine remains available as a sterilizing agents, in the form of sodium hypochlorite, and the silica becomes available as a silica sol coagulant aid.

Steel pipe gaining favor

In discussing distribution piping trends, Herman G. Dresser, principal engineer with Thomas R. Camp, Boston consulting engineer, pointed out that the use of steel pipe in distribution systems had to await the arrival of methods for lining and coating pipe to prevent corrosion and that the large scale use of steel pipe was just getting under way when rolling mill capacity was required for war production.

New types of joints, particularly mechanical ones, permitting flexibility, the use of plain-end pipe, and absolute tightness in spite of strains, stresses and settlement will also bring steel pipe into prominence in the postwar period, according to Mr. Dresser. He also offered an opportunity for interesting speculation by saying, "who knows but what pipes may someday be made of materials which are now unknown. It is not impossible to conceive of cast iron pipe being lined with a material from the plastic industry. If this material retains the properties often associated with it, such as flexibility, smoothness and resistance to abrasion, it may prove to be the ideal pipe lining."

Ralph P. Hall, consulting engineer of Boston, summed up the trend in pumping station equipment as one from the slower reciprocating pump to the high-speed centrifugal type, and from steam-driven to electric-driven or diesel-driven units. Lately, emphasis has also been placed on standby units, generally gasoline-driven. Automatic operation of pumping units has also claimed a great deal of attention, with the bellows-type pressure regulator developed within the last few years finding increasing favor because of its better surge control.

The design and construction of standpipes and elevated tanks is tending toward welded construction for larger capacities, but riveting is still cheaper for small-capacity storage according to Howard E. Bailey, consulting sanitary engineer of Boston. Pre-stressed concrete structures, especially those using high-tensile spiral wire bindings, are gaining rapidly in popularity. The wire binding is also being used as a method of repairing and re-stressing the steel reinforced structures which, due to shrinkage of concrete, have lost the original pre-stress. Other radical changes are mostly in the shape of the enclosing structure to meet hydraulic conditions and new methods of assembly, with some emphasis being placed on esthetic values.

Other papers of the symposium were devoted to financing, office practices and organization for emergency repair.

A paper on "Submarine Water Mains Built in Deep Water," by James R. Gardner, project engineer, Federal Works Agency, Portland, Me., described the construction under severely adverse conditions of water transmission facilities to the islands in Portland harbor through depths ranging to 120 ft. This job was described by Mr. Gardner in *Engineering News-Record*, Dec. 2 ,1943, vol. p. 816.

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Backlog of $325 million construction for Canada

A backlog of more than $325,000,000 worth of building construction in Canada, excluding federal and provincial governmental projects, has been accumulated. This is the estimate of the Department of Munitions and Supply in a special review of war construction just issued.

The Dominion government has placed contracts for construction and equipment installations with a total value of $1,381,300,000 since the outbreak of war. Of this amount, actual construction contracts totalled more than $455,000,000—over half of which has been spent on expanded industrial facilities. An additional $400,000,000 has been expended on barracks, hangars and similar facilities for the armed forces. More than 700 hangars have been constructed, largely in connection with the commonwealth air training plan. Wartime Housing Ltd., government company formed to provide emergency housing for war workers, has spent $79,000,000 in building 17,700 houses which, together with staff houses and hostels, have provided accommodation for more than 100,000.

Wartime construction in Canada is virtually at an end, the total for 1944 amounting to only about $40,000,000 as compared with an average expenditure of over $100,000,000 for the last two or three years.

Construction Communiques

Engineering news from the battlefronts

Guam—Lieut. Philip Nelson of Williamsburg, Va., a civil engineer officer-in-charge of a Seabee detachment, has been assigned to rebuild the town of Agana, reduced to rubble by U. S. warships in the pre-invasion bombardment.

Lieutenant Nelson, who was employed as construction engineer on the Williamsburg restoration project from 1938 to 1941, says in "Peary-Scope", published at Camp Peary, Va., the area restored in Williamsburg was a little larger than Agana, but the experience gained rebuilding the 18th century colonial capital is coming in handy as he restores the Guam town to its normal 20th century condition.

Nelson must solve problems at Agana which didn't bother him on the Williamsburg project. There a staff of experts was on hand to do the research, and the work was done according to their plans. In Agana, however, he has to determine what was there before shells hit and work accordingly.

Guadalcanal—Warrant Officer William A. Davis, Marine engineer now stationed at Camp Lejeune, N. C., has just been commended by the Commandant of the Marine Corps for military engineering effectiveness. He helped construct and lay American forces' first bridge on enemy territory in World War II, on Guadalcanal in the summer of 1942.

Of Davis' record, Lieut. Gen. Alexander A. Vandegrift, Marine commandant, said: "Several instances have been brought to the attention of this headquarters in which you have displayed outstanding initiative, resourcefulness, and industry, and have contributed practical and valuable designs of field expedients in the performance of your engineering duties. Among these are your design for a floating bridge utilizing amphibious tractors and pontoons, the floating footbridge suggested for portability and simplicity of erection, and the sanitary latrine now being used in the field. Your contributions to the effectiveness of military engineering in the Marine Corps are outstanding."

Northern Burma—Touring the forward areas of Northern Burma recently, Brig. Gen. Lewis A. Pick, engineering director of the Ledo Road project, stopped to chat with a young engineer from Chicago, Pfc. Glenn Ballowe, who was operating a road grader.

"Dangerous business, operating engineering equipment under Jap artillery fire," remarked General Pick.

The Chicagoan's reply was a hoarse shout: "Look out!"

General Pick, whirling around, saw a C-47 cargo plane out of control and careening crazily toward him. He dashed off just as the runaway plane crashed to the ground, slashing the grader beside which the general and Ballowe had stood.

As a battle-grimed crowd of engineers and workmen—Chinese, American and British—crowded around the wreckage, Pfc. Ballowe elbowed his way to the general.

Sir," he said with a grin, "flying is a dangerous business, too."

France—"The men who build the advance airfields from which the Ninth Air Force fighter-bombers take off to tear up Hitler's army can work. However, the front has been advancing so rapidly lately that the engineers have been hard put to keep up with it," says Lee McCardell, in a dispatch to the Baltimore "Sun."

"The construction battalions reconnaissance teams are well beyond Paris in the race to keep the fighter-bombers on the heels of our armored columns and motorized infantry now rolling toward the German borders.

"The construction of these fields, now stretching halfway across France, is one of the greatest engineering feats.

"Aviation engineers are in the thick of the fight. Their reconnaissance parties, which select new sites and survey captured fields for reconditioning, are on the front line—sometimes beyond it. Their bulldozers and graders move up with the ammunition trucks. It is not unusual for them to be under fire for long periods of time."

The Marshalls—Members of a Seventh Army Air Force battalion of aviation engineers were commended by Brig. Gen. Robert D. Douglas, Jr., for hacking an airstrip from the smoking debris of Japanese installations within four days after landing in the Marshalls, an Air Force dispatch revealed on Sept. 3.

Within 18 days the battalion finished a hard-surface coral runway more than 6,000 ft. long, bringing a new group of Japanese island targets, including Truk and Ponape, within range of Seventh Air Force bombers.

The ingenious adaptation of captured Japanese equipment and material was attributed in part to the speed with which the new air base was made ready.

Official U. S. Navy photo

How the Seabees have transformed Eniwetok

Completely obliterating the ravages of battle at Eniwetok, Navy Seabees have quickly made an efficient and eye-pleasing American base out of this former Jap stronghold in the Marshalls.

Above is an air view showing part of the smooth coral-surfaced airplane landing strip, and the Quonset huts and tents among the palms which comfortably house the service men based on the island.

BRIEF NEWS

Rentschler Field, East Hartford, Conn., owned by the Pratt & Whitney Division of the United Aircraft Corporation, is being developed into the largest privately owned airport in the East. The take-off and landing strip is nearly a mile long and work is in progress on three runway strips 5,000 ft. long each, and 150 ft. wide.

The drainage system, being built, requires nearly 20 miles of piping. Two brooks crossing the field have been diverted underground through culverts. Electric equipment is being provided for night test flying. All runways are to be floodlighted. A 57-ft. tower is to be provided with a glass enclosed observation room 16 ft. in diameter.

Wilmington, N. C., has let a contract for a 4,000,000-gal. reinforced concrete reservoir. Part of a $2,620,000 water works program, it will be built near the city's new 7 mgd. filtration plant. The Norfolk Contracting Co. of Norfolk, Va., was the low bidder, at $167,000.

Ten thousand additional Mexicans are to be brought into the United States for employment as track and maintenance of way workers on railroads, the War Manpower Commission has announced. Arrangements for their recruitment and entry have been made with the Mexican Government. This will raise the total number brought in for work on railroads to approximately 50,000.

A construction camp will be converted into an Indian village as the result of a purchase made recently by the Makah Indian tribe of Neah Bay, Wash. The tribal council purchased for $22,000 a $1,500,000 wartime construction camp built to provide housing for workers on federal projects in Clallam county, now completed. The Indians have sold many of the surplus buildings to a Seattle wrecking firm and are moving the rest to their village.

Establishment of a large naval base at Manzanillo, the Pacific port that is the western terminus of the National Railways of Mexico, has been ordered by a presidential decree, providing for the expropriation, with due indemnification to the owners, of 10,162 square meters of land as a site for the base which will be constructed by the marine ministry. Reported cost of the work is about $1,000,000, and construction is expected to begin in the late fall.

The decree also provides for the building by the ministry of a school for merchant marine officers and sailors on a tract of 2,223 acres at the port of Vera Cruz. This work, it is reported, will cost $400,000.

In an effort to obtain a deep water port for Sacramento, Calif., $75,000 is being contributed by organizations in the area for the expenses of presenting the channel proposal to Congress and to solicit government approval of construction as a postwar project. The city council has voted $2,000, and the county board of supervisors has pledged an equal amount to be added to subscriptions obtained by the city chamber of commerce. The proposed port would cost $12,000,000, be constructed chiefly with government funds, and provide a turning basin at Lake Washington in Yolo County.

Greeley and Hanson, consulting engineers, Chicago, have been engaged by Anderson, Ind., to make a survey of the city's sewerage system preliminary to postwar plans for expansion. A sewage disposal plant was completed three years ago to handle eight million gallons daily. At present it is required to handle thirteen million gallons. It was built for a 30,000 population. Today the population is 55,000 and growing. The proposed survey, as announced by Mayor C. D. Rotruck and City Engineer Virgil Lee, would include all suburbs.

J. P. Porter & Co., Quebec, have a contract at St. John, N. B., for dredging out steamship berths and a channel. Instead of using scows for dumping outside the harbor, the mud is pumped through pipes to fill in a site for factories on swampy shores of the harbor.

The Galveston County, Tex., Commissioners Court has applied to the Texas Highway Commission for $100,000 from the Public Works Administration to match the $100,000 put up by Galveston County for the initial engineering work on the Bolivar Tunnel, connecting Galveston Island with Point Bolivar.

Preliminary plans for the tunnel call for a structure 3.9 mi. long with the tunnel proper slightly over a mile long. The structure would consist of a trestle and artificial island at the Point Bolivar end and an underwater tube, ventilated, tile-lined and lighted by electricity with a 21-ft. roadway over which traffic would move at 30 miles an hour. The tunnel would also be equipped with hurricane gates, and a storage battery would supply power for every third light so that any damage to operating equipment would not cause the tunnel to be entirely dark.

Six states favor Mexican water treaty

Representatives of six states in the Colorado River and Rio Grande basins meeting in Denver on August 28, gave their endorsement to the treaty with Mexico relating to international waters which is now before the Senate (*ENR* Feb. 10, 1944, vol. p. 169 and March 2 vol. p. 299).

Clifford Stone, director of the Colorado Water Conservation Board, who acted as spokesman for the representatives of Colorado, Arizona, New Mexico, Wyoming, Texas, and Utah, said that the question of water rights between the United States and Mexico must be settled in order to permit the fullest development of the water resources.

This treaty, said the statement signed by representatives of the six states, "has been negotiated from the standpoint of our enlightened self-interest as well as with a due regard to our solemn international obligation. Full consideration of all phases of the question of ratification will be given by the senate foreign relations committee."

Those signing the statement in addition to Mr. Stone were Charles A. Carson, attorney, Colorado river commission of Arizona; F. C. Merriell, chief engineer, Colorado river water conservation district; Fred E. Wilson, attorney, interstate streams commission, New Mexico; A. L. Cramer, president, Water Conservation Assn., lower Rio Grande valley, Texas; Loren C. Bishop, Wyoming state engineer and interstate streams commissioner, and Grover A. Giles, attorney general of Utah.

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Houston postwar work estimated at $31,000,000

A $31,000,000 program of postwar municipal improvements, all to be financed from local tax funds, has been announced for the city of Houston, Tex.

It calls for $7,088,000 in street and highway improvements; $8,100,000 for sanitary sewers and disposal; $8,500,000 for drainage and flood control; $800,000 for additions to the municipal airport; $1,869,000 for parks and recreation facilities; $1,300,000 for a civic center; $1,000,000 for a police-jail building; $573,000 for two new incinerators; $1,195,000 for public health including a $650,000 tuberculosis hospital, $250,000 for health and welfare centers, and $295,000 for a home for convalescents, chronics and incurables; $100,000 for traffic signals; $325,000 for fire stations and an alarm system and $150,000 for library improvements.

A Missouri Valley Authority is proposed

(Continued from page 1)

...not submit a joint report to Con...ress without a request for such a re...ort.

The President cited the TVA as a ...odel for the authorities he proposes ...r the Missouri, Arkansas and Colum...a basins. Concerning the touchy ques...n of states rights he said, "I am sure ...at none of the states in the Tennessee ...iver basin have lost any of their rights ...ecause of the creation of the authority ... that valley."

Federal departments affected

The President failed to mention an...her question of rights that will surely ...e raised when Congress comes to con...der his message. The Corps of Engi...eers lost its authority over develop...ent of the Tennessee River for navi...tion when the TVA was created.

That not only the Corps, but the Bu...au of Reclamation, the Federal Power ...ommission, the Rural Electrification ...dministration and other agencies ...ould also lose jurisdiction in the Mis...uri basin, upon establishment of an ...thority there, is evident from words ... Senator Murray of Montana who, ...pon introducing a Missouri authority ...ill in Congress, explained that "it ...ould be independent of existing fed...al executive departments." The same ...tuation, presumably, would be true in ...e Columbia and Arkansas River bas...s if the authorities proposed by the ...esident were set up.

Senator Murray's bill provides for ...tting up an authority of three mem...ers to be appointed by the President, ...ho would also designate the chairman, ...e authority to be directly responsible ... the President and to Congress. It ...ould have contractual and other pow...s of a broad nature. The authority ...ithin two years would make its recom...endations for a unified plan for water ...ntrol and resource development in ...e basin, and "if not affirmatively dis...proved by the Congress by joint reso...tion" within four legislative months, ... plan would "be deemed to be ef...ctive," and its provisions would be ...rried out.

Support for the authority plan

Support of the authority idea for the ...issouri is being given editorially in ... Louis—where interests favor de...lopment of the river for navigation— ... the *Post-Dispatch* and the *Times*...r. The bill's sponsor, however, Sen...or Murray, is from Montana, where ...al support is for irrigation.

Reclamation interests in states of the ...per basin want to be assured that use of water for navigation in the lower stream will not be given precedence over use for irrigation and other consumptive purposes. To this the Army Engineers reply that under no circumstances would they divert water for navigation if the water is needed to save crops upstream. Furthermore, the Army Engineers hold to their contention that there is enough water for all needed purposes, and that the need is to build sufficient reservoirs to store the water until it is required during dry periods.

Some months ago, in commenting on amendments to the pending rivers and harbors bill, the President stated that the primary importance of beneficial consumptive use should be established without any cessation of federal jurisdiction under the commerce clause of the Constitution.

Pending Missouri Valley Authority bills similar to Senator Murray's S. 2089 include: S. 211 (Gillette), H.R. 5377 (Cochran), H.R. 5410 (Rankin), H.R. 802 (Rankin). The latter would divide the entire country into nine regions, each with its own operating authority.

JOBS OF THE WEEK

PAVING RUNWAYS, Idlewild, N. Y.

A. I. Savin Construction Co., East Hartford, Conn., was the lowest bidder for paving runways A, B, and C at Municipal Airport, at $2,203,945. Department of Marine & Aviation, New York, N. Y., opened bids. Jay Downer, New York, is the engineer.

ROADS, Illinois

Division Highways, State of Illinois, Springfield, awarded a contract for improving 7.98 mi. state highway in McLean and Livingston Counties to White Consolidated, Inc., Chicago, Ill., $566,458; 7.2 mi. road in McLean County to Arcole Midwest Corp., Chicago, Ill., $598,223. W. W. Polk, Springfield, is the state highway engineer.

HOSPITAL, Toronto, Ont.

Department of Public Works, Ottawa, Ont., awarded a contract for the construction of a hospital to Redfern Construction Co., Ltd., Toronto. The estimated cost is $2,887,000.

STEAM ELECTRIC UNIT, Dallas, Tex.

Dallas Power & Light Co., Dallas, awarded a contract for the design and construction of Mountain Creek steam electric station, including 30,000 k.w. turbo-generator, housing unit, station auxiliaries, etc., to Ebasco Services, Inc., New York, N. Y. The estimated cost is $2,500,000.

TEST CELLS BUILDING, Indianapolis, Ind.

National Concrete Fireproofing Co., Cleveland, O., will construct a 1-story, 40x50 ft. brick and concrete test cells building for the Allison Engineer Division, General Motors Corp., Detroit, Mich. The estimated cost is $1,000,000. Defense Plant Corp. will finance.

HOSPITAL, North Little Rock, Ark.

William R. Goss Construction Co., Chicago, Ill., was awarded a contract for a Veterans Hospital by the Veterans Administration, Washington, D. C., at $1,695,000.

HUTS, ROADS, Oceanside, Calif.

Haddock Engineers, Ltd., Los Angeles, Calif., will construct 300 steel, arch-rib huts, asphaltic concrete roads, and area paving at Camp Joseph H. Pendleton at an estimated cost of $1,200,000. Bureau of Yards & Docks, Navy Department, Washington, D. C., let the contract.

ADDITIONAL BUILDINGS, Yorktown, Va.

Bureau of Yards & Docks, Navy Department, Washington, D. C., awarded a contract for reconstructing, altering and constructing additional buildings at Naval Mine Depot to Doyle & Russell, Richmond, Va., at $1,673,220.

ORDNANCE STOREHOUSE, Crane, Ind.

Bureau of Yards and Docks, Navy Department, Washington, D. C., awarded a contract for four ordnance storehouses at Naval Ammunition Depot, to Maxon Construction Co., Dayton, O., at $1,014,000.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 15.

OBITUARY

Bels C. Peterson, 68, senior member of the general contracting firm of N. C. Peterson Co. of Charles City, Ia., died recently. He had been in the contracting business for 30 years.

Charles R. Watts, 66, Seattle, Wash., building contractor, died Sept. 6. Mr. Watts was president of Charles R. Watts & Co. until his retirement from business recently. Born in England, he went to Seattle in 1908. He was a vice president of the Washington State Good Roads Association.

John J. Shevlin, 62, a construction engineer for the Ranger Aircraft Engines Division of the Fairchild Engine & Airplane Corp., Jamaica, N. Y., died Sept. 18. Mr. Shelvin was president of the former Shevlin Engineering Co.

Frank Cunningham Taylor, Sr., 66, pioneer railroad contractor, who built the Florida East Coast Railway, died Sept. 9 in Jacksonville, Fla.

Lafayette C. Reynolds, 61, of Westhampton, Mass., civil engineer, died Sept. 16. Born in Amsterdam, N. Y., Mr. Reynolds was graduated from Union College. He is credited with having proposed a track layout plan for the Grand Central Terminal in New York, and his design for the complicated problem won for him the assignment to make the final track level layout for the station.

Max Psaty, 67, president since 1922 of Psaty & Fuhrman, Inc., building contractors, New York City; died Sept. 19. Mr. Psaty had been engaged in the construction business in New York since 1900. Among the buildings constructed by his company were Hunter College, the New York Ampitheater at Flushing Meadows Park, and many public schools.

Nicholas Daleiden, former superintendent of construction for the Wisconsin Telephone Co., Milwaukee, died Sept. 11 at his home there. He was with the firm nearly 60 years.

John LaVies, 67, for more than fifty years active in the building field at Milwaukee, Wis., as head of the Western Contracting Co., died Sept. 10.

John Lockhart Towers, 43, of Springfield, Ill., for the last 21 years a civil engineer with the Illinois division of highways, died Sept. 19. Upon being graduated from South Dakota State College in 1923 he became a junior highway engineer with the division of highways, and was assigned to the district highway office at Peoria. In 1935 he was assigned to the traffic section of the bureau of maintenance at Springfield, where he remained until his death.

M. C. Caddell, 54, contractor, road builder and owner of the M. C. Caddell Construction Co., died Sept. 17 in Jacksonville, Fla.

R. J. Cassie, 53, former division engineer for the Florida State Road Department and a resident of Fort Pierce, Fla., for several years, died recently in Augusta, Ga. Mr. Cassie has been stationed for some time at Gulfport, Miss., where he was engaged in work on a government airfield project.

C. D. Mayhew, 59, a graduate of Rutgers University, and a well-known civil engineer with the U. S. Engineer's New York District, for over 35 years, died at Daretown, N. J., recently.

Lorne I. Latimer, of Yarmouth, N. S., for the past four years a general contractor there, died Sept. 8. He had gone to Nova Scotia in 1940, as a foreman with the Tomlinson Construction Co., Toronto, in the execution of dominion government construction contracts in several parts of the province.

WEEKLY CONSTRUCTION SUMMARY

CONTRACTS

Continental U. S. Only
(Thousands of Dollars)

	Week Ending Sept. 30 1943	Sept. 21 1944	Sept. 28 1944
Federal	$29,661	$9,883	$19,201
State & Municipal	3,915	4,955	6,306
Total public	$33,576	$14,838	$25,507
Total private	17,146	4,397	5,338
TOTAL	$50,722	$19,235	$30,845
Cumulative 1944	(39 weeks)		$1,879,561
1943	(39 weeks)		$2,488,373

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1943 39 Weeks	Cumulative 1944 39 Weeks
NON-FEDERAL	$283,369	$348,820
Corp. Securities	17,408	96,795
State & Mun.	100,298	111,085
RFC Loans	14,530	57,940
FPHA Loans	3,133	.....
REA Loans	20,000	20,000
Fed.-Aid Hwy.	128,000	63,000
FEDERAL	$2,753,838	$1,263,800
TOTAL CAPITAL	$3,037,207	$1,612,620

ENR INDEX NUMBERS

Index base=100		1913	1926
Construction Cost	Sept. '44	300.46	144.43
Building Cost	Sept. '44	236.00	127.57
Volume	Aug. '44	121.	53.

MEETINGS

National

INSTITUTE OF TRAFFIC ENGINEERS, 15th annual meeting, Sherman Hotel, Chicago, Oct. 1-4.

AMERICAN PUBLIC HEALTH ASSOCIATION, second wartime public health conference and 73rd annual business meeting, Hotel Pennsylvania, New York, N. Y., Oct.

CONFERENCE ON NEW DEVELOPMENTS IN WOOD PRODUCTS, New York State College of Forestry, Syracuse University, Syracuse, N. Y., Oct. 6-7.

AMERICAN ASSOCIATION OF PORT AUTHORITIES, annual meeting, Hotel New Yorker, New York, N. Y., Oct. 10-13.

FEDERATION OF SEWAGE WORKS ASSOCIATION, annual meeting, William Penn Hotel, Pittsburgh, Pa., in conjunction with the annual conference of the PENNSYLVANIA SEWAGE WORKS ASSOCIATION, Oct. 12-14.

INTERNATIONAL CITY MANAGERS' ASSOCIATION, annual conference, Medinah Club, Chicago, Ill., Oct. 12-17.

AMERICAN WELDING SOCIETY, 25th annual meeting, Hotel Cleveland, Cleveland, Ohio, Oct. 16-19.

SOCIETY FOR EXPERIMENTAL STRESS ANALYSIS, fall meeting, Carter Hotel, Cleveland, Ohio, Oct. 17-20.

ENGINEERS' COUNCIL FOR PROFESSIONAL DEVELOPMENT, 12th annual meeting, 29 West 39th St., New York, N. Y., Oct. 20.

AMERICAN MUNICIPAL ASSOCIATION, annual conference, Hotel Blackstone, Chicago, Oct. 25-27.

Regional and Local

NORTH CAROLINA LEAGUE OF MUNICIPALITIES, 36th annual conference, Winston-Salem, N. C., Oct. 4-6.

GEORGIA WATER AND SEWAGE ASSOCIATION, 13th annual meeting, Georgia Institute of Technology, Atlanta, Ga., Oct. 5-7.

SOUTHWEST SECTION, AMERICAN WATER WORKS ASSOCIATION, Stephen F. Austin and Driskill Hotels, Austin, Texas, 17-19.

MISSOURI VALLEY SECTION, AMERICAN WATER WORKS ASSOCIATION, Hotel President, Kansas City, Mo., Oct. 23-24.

CALIFORNIA SECTION, AMERICAN WATER WORKS ASSOCIATION, annual meeting, Biltmore, Los Angeles, Calif., Oct. 24-

WEST VIRGINIA SECTION, AMERICAN WATER WORKS ASSOCIATION, annual meeting, Chancellor, Parkersburg, W. Va., Oct.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.
ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*
(Daily service also available—Write for details)

WATER SUPPLY

POSED WORK

., Conway—P. Gordy, bus. mgr. Conway Conway, $60,000 gal. reservoir for inal WW, $15,000. CD 7/19—ENR 8/10. Postwar Projects.

alif., San Bernardino—City Water Bd., ity Hall, imprv. water sys., incl. reservoir and pipelines. $500,000.

., Cleveland—City, F. Foy, purch. agt., ity Hall, purchasing 30 m.g. pump for and Station, 40 m.g. and two 10 m.g. ps for Division Stations and 10 and 20 pumps at Fairmount Station. $750,000. amlin, City Hall, engr.

a., Apache—City, W. E. Smith, mayor, a preliminary plans exten. WW sys. $25,-

a., Cushing—City, J. W. Flint, mgr., minary plans completed, water purifi- n plant and distr. sys. exten., addns. 00. J. W. Flint, Cushing, engr.

., C., Whamsboro—City, F. E. Lyles, chn. P. Wks., municipal WW sys., addns. ts., incl. installing new mixing chamsettling basin, piping, chemical storage, house and 3 dry feed machines, etc., 11-150 N. $53,700. **FWA.** Harwood e, P. O. Box 289, Spartanburg, engrs. 1/30—ENR 9/7.

ex., Baytown—Harris Co. Fresh Water ply Dist. 8, Baytown, water imprvs., 11-481-N, $88,750. **FWA.** J. J. Rady, rance Bldg., Fort Worth, engr. CD 3/16 1/21.

ex., Goldthwaite—Town, WW sys. exten. 00. Bonds voted.

ex., Handley—Tarrant Co. water Control mprvt. Dist. 2, Handley developing water ly well. $15,000. **FWA.** Freese & Nichols, Capps Bldg., Fort Worth, engrs. CD —ENR 8/17.

a., Marinette—City, Anne Murphy, clk., eating water plant, rebuilding booster n, electrify plant, construct steel tower, alling pipelines. $50,000. Foth, Boyd orath, Columbus Bldg., Green Bay, engrs.

., C., Brighouse—Richmond Twp., R. C. er, clk., Brighouse, WW exten. $25,000. Johnstone, Town Hall, engr.

., C., Kelowna—Municipality, addnl. 2 reservoir. $15,000. H. A. Blakesugh, P. O. Box 78, engr.

., C., West Vancouver—Corp. of West couver, repairing wooden watermains ing replacement. $50,000. E. A. Richon, c/o owner, engr.

a., Winnipeg—Municipality, watermains illice Ave. from Ellice to St. Matthew and St. Matthews Ave. from Goulding trathcona Sts. $32,000.

k., Atikokan—Municipality, WW sys. 00.

k., Meaford—Municipality, WW imprvs., meter at pumphouse, replacing pipes. 00. Pub. Utilities Comn., W. V. Brown, Meaford, engr.

k., New Liskeard—Municipality, waterm, standpipe. $37,000. H. W. Sutcliffe, n Hall, engr.

k., Niagara Falls—Municipality, new 6 watermain 6 Ave., etc. $20,000. W. S. City Hall, engr.

k., Waterford—Municipality, c/o D. A. secy., installing 4 in. watermains, other rs. $25,000. Waterford Pub. Utilities n., Waterford, engr.

e., Deloro—Municipality, preparing plans ring 2 mi. water supply from River St. rence. $50,000. Dpt. P. Wks., Quebec engr.

e., St. Mathias—Compagnie de Aqueduc Saint Mathias, St. Mathias, WW sys. 0. $25,000.

e., St. Sauveur des Monts—Municipality, J. O. Lapointe, mayor, St. Sauveur des s, WW exten. $30,000. Ministry of th, Quebec City, engr.

k., Weyburn—Municipality, replacing watermains. $25,000. A. J. Cameron, Hall, engr.

S ASKED

Bids Asked October 5

Y., New York—Comr. Water Supply, & Electricity, Municipal Bldg., Zone 7, hauling, laying watermains, appurtenances, Flushing, 23, 71 and 72 Aves., 124 St., Archway, Holder, and Middlemay Pls., 44th Dr., 71 and 72 Rds., Horace Harding and Little Neck Blvds., and Greenway terraces, Queens Boro. Plans deposit $1.

Bids Asked October 5

†Va., Scottsville—Town, P. Harris, mayor, water supply imprvs., incl. new raw water pump and pumphouse, wash water tank and tower, dry feed chemical machine, filter piping and gages, necessary pipe connections, concrete work, etc. **FWA.** Plans deposit $15. Wiley & Wilson, 907 Peoples Natl. Bank Bldg., Lynchburg, consult. engrs. CD 8/18—ENR 8/24.

Bids Asked October 6

†Md., Baltimore—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D. C., city water supply line at U. S. Quarantine Station, Curtis Bay.

Bids Asked October 20

†Ala., Mobile—City, R. C. Herndon, mayor, City Hall, exten. water distr. sys., Ala. 1-288. $354,500. **FWA.** J. B. Converse & Co., Wilson Bldg., Mobile, engr. CD 8/16—ENR 8/24.

Bids Asked

R. I., Fiskville—Pawtuxet Valley Water Co., 1072 Main St., West Warwick, steel water storage tank, standpipe, Jenks & Ballou, 2600 Industrial Trust Bldg., Providence, engrs. CD 8/28—ENR 8/31.

LOW BIDDERS

Tex., Houston — City, M. H. Westerman, secy., City Hall. Sept. 20, two 5 m.g. steel reservoirs at S.W. Pump. plant, from Bethlehem Steel Corp., 7100 Clinton Dr., **$120,498**; furnishing installing automatic strainers to eliminate sand from 6 new wells to be drilled at S.W. Pump. plant from L. P. Kinney Co., 233 Oliver Ave., Pittsburgh, Pa., **$26,-158**. Est. $27,000. CD 9/11.

†Va., Williamsburg—City, Sept. 20, filtration plant, pump. sta., and water line from Walton's Mill Pond, Va. 44-373, from Dominion Engineering Co., Hopewell, **$215,401**. **FWA.** CD 9/6—ENR 9/14.

Que., Sherbrooke — Municipality, A. Desiaurier, clk., filtration plant bldg., from Newton Constr. Co., Ltd., 160 Victoria St., **$195,668**; equip., from Roberts Filter Co. of Canada, Ltd., 11 W. King St., Toronto, **$112,-490**. J. C. Cote, City Hall, engr.

CONTRACTS AWARDED

Mass., Westfield—City, A. B. Long, mayor, City Hall, replacing 2 in water line with 10 in. watermain, day labor. Over **$15,000**. CD 8/28—ENR 8/31.

†N. J., Bayonne—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., general imprvs. water supply sys., NOY 7220, to Interboro Co., 109 E. 29 St., New York, N. Y., **$27,847**. CD 4/17.

†Okla., McAlester—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., erecting two 100,000 gal. elevated water tanks, Naval Ammunition Depot, NOY 10708, to Chicago Bridge & Iron Co., 10506 Hunt Bldg., Tulsa, Zone 3. **$25,850**.

Pa., Phila. — Dpt. P. Wks., Bureau of Water, City Hall Annex, Contracts 208-WW1, watermains in Orange and Delaware Aves., to A. J. Ellis Contg. Co., 4 and Courtland Sts., **$36,790**. Bids 9/6, awarded 9/20. CD 8/25—ENR 8/31.

Tenn., Chattanooga—Hixon Utility Dist. Comn., Ira P. Jones, pres., Chattanooga, water sys. exten. to Hixon and Dayton Pike Areas, to Stein Constr. Co., 201 Chestnut St., **$136,000**.

Tenn., Dyersburg—City Water & Light Dpt., Dyersburg, WW imprvs. incl. constructing iron removal plant, appurtenant works, to Forcum-James Co., Dyersburg, **$197,150**. Bids 9/12. CD 8/8—ENR 8/10.

Tex., Houston—City, 6 deep well motor-driven centrifugal pump. units, to Layne-Texas Co., Box 9098, **$38,065**. CD 9/7—ENR 9/14, under LB.

†Tex., McGregor—U. S. Eng., 25 St. and Avenue F, Galveston, developing water supply well at Bluebonnett Ordnance Plant, 20 mi. west of Waco, to Layne-Texas Co., 6931 Harrisburg Blvd., Houston. **$15,878**.

†Tex., San Antonio—U. S. Eng., Fort Sam Houston, water sprinkler sys., facilities for San Antonio Arsenal, to B & B Engineering & Supply Co., P. O. Box 1144, Houston, approx. **$25,000**.

Wis., Greenfield — Allis-Chalmers Mfg., 1126 S. 70 St., West Allis, rein.-con. water reservoir, to Siesel Const. Co., 514 E. Ogden Ave., Milwaukee, Zone 2, **$31,900**. Bids 9/14.

N. B., Saint John—Municipality, watermains in Ste. Catherine and Mount Pleasant Sts., Westmoreland and Virginia Aves., day labor, **$17,000**.

Que., Laurierville—Municipality, WW imprvs., day labor. **$15,000**. CD 9/12—ENR 9/14.

Que., Pointe Claire—Municipality, exten. water pipes, to Frank Ross Constr. Ltd., 736 Cote Ste. Catherine St., Montreal, Est. **$15,-000**. O. Beaudouin, Town Hall, engr.

Que., Rapide Blanc—Shawinigan Water & Power Co. Ltd., Power Bldg., Craig St. W., Montreal, reservoir, day labor. **$25,000**.

Symbols and Abbreviations Include:

* Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Site

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR):

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

†Calif., Port Hueneme—Port Hueneme Sanitary Dist., sewerage sys., Calif. 4-660-F. $170,300. **FWA.**

SEWERS, etc. (Proposed Work, Cont'd.)

Colo., Colorado Springs—Ivywild Sanitary Sewer Dist., Colorado Springs, sanitary sewerage sys. $126,000. Carroll N. Coberly, 1441 Welton St., Denver, engr.

Colo., Colorado Springs—Knob Hill Sanitary Sewer Dist., Colorado Springs, sanitary sewerage sys. $80,000. Carroll W. Coberly, 1441 Welton St., Denver, engr.

†Mo., Affton (St. Louis 23, P. O.)—Affton Sanitary Sewer Dist., C. Kuna, secy., $209 Niles Ave., Affton, St. Louis, Zone 23, 10,000 ft. 8 in. sanitary sewers and sewage lift station, Mo. 23-287. $45,000. FWA. Russell & Axon, 4903 Delmar Blvd., St. Louis 8, engrs.

★**N. J., Fairlawn**—Boro Clerk, Municipal Bldg., plans completed, sewerage sys. $1,620,000. T. F. Bowe, 110 William St., New York, 7, N. Y., engr.

O., St. Mary's—City, F. M. Hageman, Serv. Dir., City Hall, $150,000 bond election Nov. 7, sewage treatment plant, storm and sanitary sewers. Floyd Brown & Assoc., Marion Bldg., consult. engrs.

Pa., Selinsgrove—Selinsgrove Borough, c/o F. M. Machamer, Borough Hall, exten. sewerage sys. plant, $100,000. R. H. Craig, 222 N. Third St., Harrisburg, engr.

Puerto Rico, Mayagüez—Insular Sewerage Service, San Juan, plans exten. sanitary sewerage sys. to Dulces Labios and Pueblo Nuevo Wards. $115,000.

Alta., Calgary—Municipality, sewer facilities, Rosedale Sub-division. $40,000.

Ont., Hagersville—Town, I. Awde, clk., sewerage and water sys. $70,000. James, Proctor & Redfern, Ltd., Excelsior Life Bldg., Toronto, engrs.

Ont., Toronto—Canadian Wirebound Boxes, Ltd., 1000 E. Gerrard St., drainage sys. $25,000. M. Sutcliffe, c/o owner, engr.

BIDS ASKED

Bids Asked October 6

Minn., Austin—City, J. H. Weiland, recdr., 2,100 lin. ft. 30 in. sanitary sewer Ash St. from Red Cedar River to Hope St. $25,000.

Bids Asked October 10

Calif., Hayward—Oro Loma Sanitary Dist., 21845 Foothill Blvd., storm water trunk line outfall sewer facilities from Tract 681, Eden Twp., to creek crossing Western Pacific Railway right-of-way. Plans deposit $10. Cedric Macabee, 156 University Ave., Palo Alto, dist. engr.

Bids Asked October 19

Fla. Jacksonville—City Comrs., City Hall, incinerator on South Side. $100,000. Plans deposit $5. W. E. Shedden, city engr. CD 9/20.

Bids Asked October 30

†Fla., Whiting Field—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., storm drainage facilities, Naval Auxiliary Air Station, NOY 10113.

Me., Bath—City, refuse incinerator with two 25 ton units; adv. ENR 9/28.

LOW BIDDERS

Calif., Long Beach—City, City Hall, Sept. 13, vitr. clay sanitary sewer in Sewer Dist. 13-E2. Spec. R-1404, from T. L. Gogo, 10024 S. Figueroa St., Los Angeles, $27,989. G. E. Baker, City Hall, engr.

†Tex., Houston—Federal Works Agency, 7300 Wingate St., Fort Worth, Sept. 20, Contr. 6, sewage disposal plant and lift station, from Tellepson Constr. Co., 3900 Clay Ave., $198,190; Contr. 7, sewage collection lines and lift station, from C. W. George, c/o Wm. Penn Hotel, $185,509, both Tex. 41-664-F. CD 9/11.

CONTRACTS AWARDED

Calif., Hayward—Oro Loma Sanitary Dist., 21845 Foothill Blvd., sanitary sewerage sys. in Eden Twp. between here and San Leandro, Alameda Co., to J. Pestana, 4039 Fruitvale Ave., Oakland, $59,208. C. Macabee, 156 University Ave., Palo Alto, engr.

Calif., Santa Fe Springs—Santa Fe Springs Waste Water Disposal Co., Woods Ave., remodeling, enlarging concrete basins, installing flocculating and scum removal equip., to Contracting Engineers, 2310½ W. Vernon Ave., Los Angeles, $35,000. Bids 9/13. CD 8/30.

†Fla., Barin Field (br. Pensacola)—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25 D. C., storm drainage sys., soil erosion and control, NAAS, NOY 9182, to Noonan Constr. Co., Pensacola, $65,728. CD 3/21, under Unclassified.

Mont., Walkerville—Sewerage sys., to Kiely & Shannon, east of Butte, $79,765. Bids 8/7. J. Healy & J. W. Johns, 840 W. Bway., Butte, engrs.

B. C., Dawson Creek—Secy. Dpt. Transport, Ottawa, Ont., sewage treatment plant, to Bennett & White Const. Co., Ltd., 510 W. Hastings St., Vancouver, about $65,000. Bids 8/14. CD 8/2—ENR 8/10.

Ont., Port Arthur—City, W. V. McComber, clk., laying several stretches sewer pipe and storm sewers, to Tomlinson Bros., Ltd., 21 King St. E., Toronto, and Hewitson Constr. Co., Ltd., 7 Walsh Block, Port Arthur. $36,165.

Que., Rawdon—Gohier & Dorais, engrs., 10 St. James St. E., Montreal, sewerage sys., for Village, to Lakeshore Const. Co., Ltd., 39 Cartier Ave., Pointe Claire. $28,000. Bids 9/5. CD 8/29—ENR 8/31.

BRIDGES

PROPOSED WORK

Calif., Long Beach—City, City Hall, rein.-con. bridge over Los Angeles River, Anaheim St. $400,000. R. R. Shoemaker (Harbor Dpt.), 1333 El Embarcadero, engr.

Calif., Los Angeles—Bd. P. Wks., City Hall, rejected bids Sept. 12, underpinning pier and abutments of Woodman Ave. Bridge over Los Angeles River, etc. L. Aldrich, City Hall, engr.

Missouri—State Hy. Comn., Jefferson City, one 49 ft. and four 35 ft. I-beam spans, creosoted pile bents over Labadie Creek, Franklin Co. C. W. Brown, Jefferson City, engr.

Nebraska—Dpt. Roads & Irrigation, Lincoln, rejected bids Sept. 14, bridge Douglas Co.; culverts, Washington and Lancaster Counties; received no bids Sept. 14, protection work, Dodge Co. CD 9/7.

N. Y., Falconer—Ellicott Town Bd., Community Bldg., Falconer, 3 steel, concrete hy. bridges. $35,000. S. T. Benson, c/o owner, engr.

O., Barberton—City, D. D. Stevenson, dir. Pub. Serv., City Hall, plans bond election Nov. 7, 80 ft. span viaduct over Tuscarawas Ave., $42,000; 40 ft. span viaduct over Wooster Rd., $26,000. H. Busher, City Hall, city engr. CD 9/11—ENR 9/14.

N. B., Bathurst—Province of New Brunswick, Fredericton, repairing bridge linking Bathurst with Bathurst West. $30,000. Dpt. P. Wks., Fredericton, engr.

Ont., Alliston—Essa Twp., plans bridge. $25,000.

Ont., East York (Postal Dist. Toronto)—Twp. Council of East York, Toronto, subway at Canadian Pacific R. R., level crossing, Pottery Rd. $100,000. D. Corcoran, Works Comr. East York Twp. in association with J. E. Armstrong, ch. engr. Canadian Pacific Ry. Co., Windsor Sta., Montreal, Que., engrs.

Ont., Flos — Simcoe Co., plans Kirkpatrick Bridge. $25,000.

Quebec—Province of Quebec, Quebec City, reconstructing bridge between Three Rivers and Cap de Madeleine. $100,000. Dpt. P. Wks., Quebec City, engr.

BIDS ASKED

Bids Asked October 1

Pennsylvania—J. U. Shroyer, secy. Hys., Harrisburg, rein.-con. bridge superstructure and rein.-con. paving 0.07 mi. Rural Route 13002, Lehighton Borough, Carbon Co. Plans deposit $2.50.

Bids Asked October 3

Iowa—State Hy. Comn., Ames, maintenance culvert repairs, 6 repair jobs, Project M-4301, Page Co.; 8 culvert repair jobs, Proj. M-4296, Shelby Co. F. R. White, Ames, ch. engr.

Maryland—State Roads Comn., Baltimore, constructing composite lumber concrete bridge on treated timber piles over Wagiam Creek in Pocomoke City-Va. State Line Rd., Contr. Wo-223-4-111, Worcester Co. Plans deposit $5.

Bids Asked October 4

Louisiana—State Hy. Dpt., D. Y. Smith, dir., modification Caddo Lake Bridge, north of Mooringsport Old State Route 3, S.P. 78-03-01, Caddo Parish (Readvertisement). Plans deposit $2. CD 8/22—ENR 8/24, under BA.

Bids Asked October 6

Minnesota—State Hy. Dpt., St. Paul, Bridge 6446, five 100 ft. and 85 ft. continuous steel beam spans, two 45 ft. concrete deck girder spans, total length 800 ft. over Mississippi River at Brooklyn Center, S.P. 2755-02 (Trunk Hy. 100-212) F.A.P. 239 A (1), $350,000. Plans deposit $3.75; Bridge 6446, 2 span, beam span underpass, 75 ft. long, Soo Line Ry., Brooklyn Center, S.P. 2755-05 (TH 100-212) FAGM 239 B(1), $30,000. Plans deposit $2.15. CD 7/19—ENR 7/27. E. J. Miller, St. Paul, bridge engr.

Bids Asked October 11

California—State Div. Hys., Sacramento, removing, replacing with steel flooring, bridge decks on movable spans, across Richardson Bay at Manzanita and across Corte Madera Creek at Greenbrae, Marin Co.

La., Thibodaux—C. J. Caillon, secy. Lafourche Parish, 91 ft. steel pontoon bridge.

Bids Asked October 13

Kentucky — Dpt. Hys., Frankfort, reconstructing three 21-ft. 1-beam span Thorofare Creek Bridge, Union School—Little Bend Rd., Proj. MP 16-256-1, Butler Co.

Bids Asked October 14

†Ore., Terrebonne — Bureau Reclamation, Bend, 3 bridges, operating bridge and 1 farm flumes on north unit Deschutes Proj., Spec. 1769-D.

Bids Asked October 17

Calif., Los Angeles — Bd. Supervs. Los Angeles Co., Hall of Records, rein.-con. bridge addn., wooden pile and plank bulkheads, excav. channel, etc., Redondo Blvd. over Dominguez Channel, cash Contr. OR-615. Over $25,000. Plans deposit $5. O. F. Colley, Hall of Records, rd. comr.

Ore., Portland — Multnomah Co., Courthouse, reconstructing, redecking Hawthorne Bridge and east approach. $125,000. Plans deposit $10.

LOW BIDDERS

Calif., Long Beach—City, City Hall, Sept. 18, rein.-con. culvert at Atlantic Ave. and 52 St., Spec. R-1408, from J. E. Popovich, Box 261, Torrance, $31,491. G. E. Baker, City Hall, engr.

CONTRACTS AWARDED

Missouri—State Hy. Comn., Jefferson City, bridge, McDonald Co., to Gillioz Const. Co., Monett, $46,886. CD 8/22—ENR 8/24; bridge, Johnson Co., to Hannibal Contg. Co., Hannibal, $37,068, CD 9/19—ENR 9/21, under LB. Bids 9/1.

O., Cincinnati — Hamilton Co., rein.-con. box culvert, West Fork Rd., north of Delhi Rd., to Foley Constr. Co., Wyoming and New Sts., Lockland, $28,905. Est. $31,845. Awarded 9/20. H. Coates, Court House, engr.

†Tex., Texarkana—U. S. Eng., 231 W. Main St., Denison, treated timber bridges, Sol. 41-242-45-23, to W. S. Crawford, 4317 Montrose St., Dallas, approx. $27,000.

STREETS AND ROADS

PROPOSED WORK

Puerto Rico, Ponce—Municipality of Ponce, plans reconstructing municipal roads at Marueno, Anon, Tibes, and Rio Chiquito Wards. $100,000.

BIDS ASKED

Bids Asked October 3

Iowa—State Hy. Comn., Ames, maintenance resurfacing 3 mi. Iowa 9 from Osceola Co. to Iowa 178, 6 mi. Iowa 33 from Minnesota State line to Iowa 9, Project M 3234, Lyon and Osceola Counties. F. R. White, Ames, ch. engr.

†Tex., Temple—U. S. Eng., Fort Sam Houston, reconstructing pavement and install. drainage at McCloskey General Hospital, Ser. W-41-154-45-31.

N. Y., Kew Gardens—President Queens Boro, Queens Boro Hall, 120-55 Queens Blvd., Kew Gardens, Zone 15, grading, curbing, recurbing, laying and relaying sidewalks, removing, replacing trees, constructing receiving basins, etc. 171 St. and 136 Ave., grading, sidewalk and gutter area, laying, relaying sidewalks, etc. 92 St.; laying sidewalks, etc. Hillside Ave. and 43 St.

Bids Asked October 4

D. C., Wash.—District Comrs., District Bldg., concrete curbing about 3,900 lin. ft. and rein.-con. or alternate pavement about 8,400 sq. yd. 14 St. N.E. from Rhode Island Ave. to Kearney St., $45,000; concrete curbing 1,700 lin. ft. and paving 5,300 sq. yd. 14 St. N.W. from Montague St. to Concord Ave., $27,000.

Louisiana—State Dpt. Hys., Baton Rouge, bituminous surface treating 0.539 mi. Francois Levee Set-back, State Rte. 1, S.P. 46-04-17, Plaquemines Parish. D. Y. Smith, dir. Dpt. Hys.

Mo., Clayton (St. Louis, 5, P. O.) — St. Louis County, c/o County Court, W. E. Miller, clk., Court House, Clayton, St. Louis Zone 5, imprv. Muriel Ave. from western line lot 7 and west line lot 11, block 1 of Tyrone Park Subdivision, Darlow Dr., Mackenzie Rd. to western line Lanedale subdivison, etc.

Bids Asked October 5

Fla., Jacksonville—City Comrs., City Hall, new sidewalks, paving existing sidewalks in various parts of city. W. E. Shedden, City Hall, city engr.

Virginia—Dpt. Hys., Richmond, rein.-con. paving, 4 bridges 4.5 mi. Routes 1 and Alt. 1, S.P. SN-FAP-372AW3: 1235-C3, C2-B2-CS1, B1, 2 and 4, Fed. Proj. SN-FAP-336-E(4); 183-C(1), Spotsylvania Co. Plans deposit $5.

REETS, etc. (Bids Asked, Cont'd.)

Bids Asked October 6

entucky—Dpt. Hys., Frankfort, grading, ining, traffic bound surfacing 6.4 mi. ss's Road to Coal and timber area, on ss's Creek, beginning at junction with ' at Viper and exten. up Mace's Creek Wells Sawmill, SP 37-422, DA-RM, Perry

Bids Asked October 6

innesota—State Hy. Dpt., St. Paul, grad- 4 mi. S. P. 2755-04 (Trunk Hy. 100-212) S. P. 0210-03 (TH 100-212), FAP 239-A between Junction Trunk Hy. 52 in Rob- dale and East River Rd., involving 462,- cu. yd. excav., 940 dragline hours special mp excav., 15,291 cu. yd. embankment in t, 4,194 lin. ft. pipe sewer, 3,056 cu. yd. rvl. $156,000; 6.9 mi. S. P. 0210-03 (TH -212), S. P. 6239-03 (TH 100-212) and S. P. 9-04 (TH 100-212) FAP 239 C (1), between ction Trunk Hy. 45 mi. north of Columbia ights and Junc. TH 10, near New Brignton 872 cu. yd. excav., 9,280 topsoil covering, 4 cu.yd. gravel, $150,000. Plans deposit each. O. L. Kipp, ch. engr.

Bids Asked October 10

ennsylvania—J. U. Shroyer, secy. Hys., rrisburg, plain concrete base and bitum- s surfacing new base and existing pave- t, fein.-con. bridge, 0.2 mi. Traffic Route East Allen Twp., between Bath and thampton Boroughs, Northampton Co.

Bids Asked October 11

alifornia—State Div. Hys., Sacramento, ling, surfacing with imported surfacing terials and bituminous surfacing treat- t applied 1 mi. between North Reserva- Gate and Muroc School, Kern Co. G. T. Coy, state hy. engr.

Bids Asked

owa—State Hy. Comn., Ames, received no Sept. 19, imprv. 13.9 mi. Project M- Plymouth and Sioux Counties; bridges, erts. Proj. FN-771-A, Winnebago Co.; ected bids Sept. 19, imprv. 40.2 mi. Page 4.1 mi. Monona Co. CD 9/11—ENR

W BIDDERS

alifornia—State Div. Hys., 303 State g., Los Angeles, Sept. 20, imprv. 1.2 mi. Bernardino Co., from George Herz & ociates, 436 Court St., San Bernardino, 651; 14.4 mi. San Diego Co., from Grif- Co., 1040 S. Bway., Los Angeles, $54,796. 9/1—ENR 9/7.

alifornia—State Div. Hys., Sacramento, t. 20, imprv. 0.4 mi. Contra Costa Co., n Masco Constr. Co., Freight and Ferry Oakland, $41,924. CD 9/1—ENR 9/7.

., Chicago—Clerk Cook Co., 535 County g., Sept. 20, imprv. 1.6933 mi. Proj. 05 041-MFG and 1.5075 mi. Proj. 053-3839- G, from Arcole Midwest Corp., 221 N. alle St., $75,671 and $64,401 respec- ly***1.5061 mi. Proj. 053-3735-MFT, n Rock Road Const. Co., 5915 Rogers ., $67,425***1.9692 mi. Proj. 030-0809- , from Hartong & Co., 33 N. La Salle $82,915***3 rein.-con. box culverts Proj. 6406, etc., from M. J. McDermott & Co., S. Dearborn St., $30,875. CD 9/12—ENR

a., New Orleans—U. S. Eng., foot of tania St., asphalt or concrete levee slope ing 7,160 squares (100 sq. ft. each). . No. 16-047-46-10, from T. L. James Co. Inc., Kenner and Ruston, $153,940.

ass., Boston—Dpt. P. Wks., City Hall, 14, sheet asphalt paving Dorchester Ward 7 and Dorchester St. at intersection 4 St., South Boston, from Baker & Co., Hyde Park Ave., Hyde Park, $24,845. 9/1.

ass., Boston—City, Dpt. P. Wks., City Annex, Sept. 19, bituminous concrete ing Dracut St., etc., from E. M. Carriere, Whitford St., Roslindale, $57,313. CD

ass., Boston—Dpt. P. Wks., City Hall ex, Sept. 18, bituminous concrete pav- Dale St., etc., from Walter Reed Corp., Boylston St., $63,952. CD 9/14.

braska—State Dpt. Roads & Irrigation, oln, Sept. 14, imprv. 1 mi. Dodge Co. Dobson & Robinson, $22 1st Natl. Bank ., Lincoln, $49,788; rejected bids Sept. mprv. War Emergency Relief Project 356-C, Fremont-Arlington, Dodge and shington Counties. CD 9/7.

w Hampshire—State Hy. Dpt., Concord, 12, gravel surfacing 15,840 ft. hy., timber bridge DA-RM 27-A(1) Dummer Millsfield, from Landers & Griffin, 185 St., Portsmouth, $25,260.

w Hampshire—State Hy. Dpt., Concord, 22, imprv. 11 mi. Coos Co., from M. Maitteo Const. Co., Quincy, Mass., 35. Est. $45,000. CD 9/14.

ew Jersey—S. Miller, Jr., comr. State y. Dpt., Trenton, imprv., 1.693 mi., ren Co., from Fred Berlanti & Son, Inc., kland Ave., Harrison, N. Y., $699,048. 9/16—ENR 9/7.

Ohio—State Hy. Dpt., Columbus, Sept. 15, imprv. 25 mi. Allen and Hardin Counties, from City Asphalt & Paving Co., 120 Pike St., Youngstown, $155,244, est. $163,900*** 1.673 mi. and 5.181 mi. Fulton Co., from S. E. Johnson Co., 218 Terminal Bldg., Toledo, Zone 2, $32,393 and $89,458 respectively, est. $32,500 and $89,600 respectively***5.549 mi. Greene Co., from Boyd & Cook Co., Gas & Electric Bldg., Dayton, $90,293, est. $90,300 ***1.503 mi. Hamilton Co., from J. R. Jurgensen, Round Bottom Rd. & N. & W. R. R., Newtown, $49,369, est. $49,700***2.49 mi. Licking Co., from Newark Asphalt Products Co., P. O. Box 746, Newark, $28,159, est. $28,500. Received no bids 9/15, imprv. 0.573 mi. Gallia Co. CD 9/11.

R. I., Newport—City, P. Wks. Dpt., City Hall, Sept. 15, widening Bath Rd., from J. M. Toppa, 28 Kay Blvd., $51,569. CD 8/22—ENR 8/24.

Wash., Seattle—City, Bd. P. Wks., County-City Bldg., Zone 4, Sept. 14, concrete paving Highland Park Way, from Fiorito Bros., 1100 Leary Way, $29,924. Est. $30,781. CD 9/6.

CONTRACTS AWARDED

★**Illinois**—State Div. Hys., Springfield, imprv. 7.72 mi. McLean Co., to Arcole Midwest Corp., 221 N. LaSalle St., Chicago, $598,223. Bids 8/25, awarded 9/8. CD 8/29—ENR 8/31, under LB.

★**Illinois**—State Div. Hys., Springfield, imprv. 7.98 mi. McLean and Livingston Counties, to White Consolidated, Inc., 1735 West Fullerton St., Chicago, $566,458. Bids 8/18. CD 8/22—ENR 8/24, under LB.

★**Illinois**—State Div. Hys., Springfield, imprv. 6.41 mi. McLean Co., to J. C. O'Connor & Sons, Inc., 2104 Miner St., Fort Wayne 6, Ind., $623,389. Bids 9/1, awarded 9/20. CD 9/6—ENR 9/14.

Ia., Davenport—Curbing, guttering, to Phelan Constr. Co., Lane Bldg., $27,473. BA 9/5.

Ia., Guthrie Center—Guthrie Co., graveling roads, to Bagley Constr. Co., Bagley, $58,680. Bids 9/14, awarded 9/19. CD 9/6.

Michigan—State Hy. Dpt., Lansing, and Wayne County Road Comn., 3800 Barium Tower, Detroit, removing abandoned car tracks, and filling strip with concrete pavement 1¼ mi. Schaefer Rd., north of Warren Ave., Dearborn, Wayne Co., to Thomas E. Currie Co., 2531 Conner Ave., Detroit, $58,161. Bids 9/15.

Minnesota—State Hy. Dpt., St. Paul, imprv. 6.3 mi. S. P. 500-20 (Trunk Hy. 56-81) and S. P. 2312-02 (TH 56-81), to Megarry Bros., St. Cloud, and Roverud Bros., Spring Grove, $129,251; 1.8 mi. S. P. 2503-04 (TH 19-100, to Megarry Bros., St. Cloud, $33,943. Bids 9/8. CD 8/23—ENR 8/31.

Minn., Duluth—City, R. E. Gottschald, city purch. agt., resurfacing parts Grand Ave., Superior and Worden Sts., etc., to A. A. Bodin & Son, 1500 W. Railroad St., $26,000. Bids 8/25. F. A. McComber, city engr.

Minn., Willmar—Kandiyohi Co., P. Heimdahl, aud., graveling County Jobs 44:03 and 44:04, to H. M. Jones, Little Falls, $28,937. Bids 9/6.

†**N. J., Bayonne**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., paving Bayonne Annex, Navy Yard, NOY 9475, to Clinton Asphalt Co. Inc., 303 16 St., Union City, $25,561.

†**N. M., Santa Fe**—U. S. Eng., Santa Fe, paving streets, driveways at Bruns General Hospital, to A. O. Peabody, Box 1724, $27,741. Awarded 9/20.

N. M., Santa Fe—City, repairing concrete pavements, to F. D. Shufflebarger, 200 E. Central St., Albuquerque, approx. $50,000. Awarded 9/19.

North Carolina—State Hy. and P. Wks. Comn., Raleigh, bituminous pavement mixture binder course, and sand asphalt surfacing 10.8 mi. U.S. Route 301, betw. Selma and Wilson Co. line, Betterment Sect. 4-6-36-125, Johnston Co., to Brown Paving Co., Lexington, $88,170. Est. $75,000-$100,000. Bids 9/20. W. V. Baise, Raleigh, engr.

O., Cincinnati—Hamilton Co., 2 in. bituminous on 8 in. concrete repaving, sewers in Section Rd. from Reading Rd. to P.C.C. & St. L.R.R., to Foley Constr. Co., Wyoming and New Sts., Lockland, $52,010. Est. $57,371. Awarded 9/20. H. Coates, Court House, engr.

Oklahoma—State Hy. Dpt., Oklahoma City, imprv. 9 mi. McCurtain Co., to Midwest Materials Co., Cotton Exchange Bldg., Oklahoma City, $57,450. Est. $60,000. Bids 9/5, awarded 9/12. H. E. Bailey, engr.

Tex., Houston—City, resurfacing gravel and and shell streets $102,500, and graveling dirt streets, $75,000, force account.

Alta., Calgary — Municipality, c/o J. M. Miller, city clk., paving 19, 6 and 8 Aves. and 9 and 8 Sts., day labor. $25,000.

Nova Scotia—Dpt. National Defense (Sea) Ottawa, Ont., paving, surfacing roads at H. M. C. S. Stadacona, Halifax, to Standard Paving Maritime, Ltd., Lady Hammond Rd., Halifax, $125,000.

Que., Quebec City — Municipality, F. X. Chouinard, city clk., paving in St. Pascal residential area, day labor. $40,000. E. Hamel, City Hall, engr.

Que., St. Jerome—Dpt. National Defense (Army), Ottawa, Ont., surfacing roads at Military Training Centre, to Local Const. Co. Ltd., 4740 Iberville St., Montreal, $31,000.

Que., Shawinigan Falls—Paving various city streets to Page Equipment & Co. Ltd., 1497 Craig St., Three Rivers, about $30,000.

EARTHWORK, WATERWAYS

PROPOSED WORK

★†**Mont., Hamilton**—Bureau Reclamation, Denver, Colo., bids soon 47 mi. Woodside and Florence Canals. $1,000,000.

Tex., Houston—Hunting Bayou Drainage Dist. of Harris Co., c/o F. H. Low, 539 Yorkshire St., drainage proj. $400,000. Bond issue planned.

Puerto Rico, Aguadilla—Dpt. Interior, Isabela Irrigation Service, San Juan, plans regulating reservoir for Power Plants 2 and 3 at Barrio Guerrero. $105,000.

Man., De Salabery (Postal Dist. Winnipeg)—Municipality, flood protection works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Hanover (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Montcalm (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Ritchot (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Ste. Anne (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., St. Vital (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Tache (Postal Dist. Winnipeg)—Municipality, flood prevention works. $25,000. Dpt. P. Wks., Winnipeg, engr.

Man., Winnipeg—Province of Manitoba, Winnipeg, flood prevention works on tributaries of Red River, chiefly on the Seine, Morris, La Salle, Roseau and Rat Rivers. $100,000. Dpt. P. Wks., Winnipeg, engr.

BIDS ASKED

Bids Asked October 3

Ia., Rockwell City—Bd. Superva. Calhoun Co., drains in Drainage Dist. 270, 7,100 lin. ft. 8- to 15-in. tile, 1 concrete bulkhead; drains in Drainage Dist. 271, 3,700 lin. ft. 20- to 24-in. tile, 54 lin. ft. 20- to 24-in. rein.-con. roadway pipe culvert. Over $15,000. F. Akers, Rockwell City, co. engr.

N. Y., Kew Gardens—President Queens Boro, Queens Boro Hall, 120-55 Queens Blvd., Kew Gardens, Zone 15, sluiceway under Cross Bay Blvd., at Broad Channel in Cross Bay Blvd., approx 140 ft. south of 5 Rd., Broad Channel.

Bids Asked October 7

†**Ore., Ontario**—Bureau Reclamation, Boise, Idaho, sealed asphaltic-concrete lining, North Canal, Station 2282 plus 83 to Station 2302 plus 83, North Canal lateral 43.2, Station 0 plus 50, to Station 10 plus 50, Dead Ox Flat Div., Owyhee Project.

Bids Asked October 9

†**Wash., Everett**—U. S. Eng., 800 3 Ave., Seattle, Zone 4, dredging harbor, Negotiation 1030.

Bids Asked October 10

†**Arkansas**—U. S. Eng., P. O. Box 60, Vicksburg, Miss., approx. 71,000 cu. yd. earthwork on west bank Red River, Miller Co.

Ia., Spirit Lake—Bd. Superva. Dickinson Co., constructing Drainage Dist. 80, 12,895 lin. ft. 6- to 20-in. tile, repairing open ditch, removing 24,000 cu. yd. dirt, etc. Over $15,000. R. A. Furman, Spirit Lake, co. engr.

Bids Asked October 11

California—State Div. Hys., Sacramento, 0.1 mi. slide area stabilized at Benbow, Humboldt Co. G. T. McCoy, state hy. engr.

LOW BIDDERS

Calif., Long Beach—City Harbor Dpt., 1333 El Embarcadero, Sept. 19, dredging approx. 120,000 cu. yd. clay for submerged dykes, from Standard Dredging Corp., Central Bldg., Los Angeles, approx. $105,000. R. R. Shoemaker, 1333 El Embarcadero, engr.

Calif., Los Angeles—City Bd. P. Wks., City Hall, Sept. 13, channel protection work in Los Angeles River at Laurel Canyon Blvd.,

EARTHWORK, etc. (Low Bidders, Cont'd.)

from E. R. Siple, 2545 San Fernando Rd., $56,128. L. Aldrich, City Hall, engr.

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, Sept. 19, approx. 12,760 squares (100 sq. ft.), asphalt or concrete levee slope paving, etc. on Mississippi River levees, Barataria and Lake Borgne Levee Dists., Solic. No. 16-047-45-12, Plaquemine Parish, from R. P. Farnsworth & Co., Inc., 1515 S. Salcedo St., New Orleans, $75,645. CD 9/11.

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, Sept. 19, approx. 1,500,000 cu. yd. compacted earthwork, etc., Item R 278.7, Morganza Levee, Atchafalaya Levee Dist., Mississippi River Levees Solic. No. 16-047-45-9, Pointe Coupee Parish, from Hendry Corp., Carondelet Bldg., New Orleans, $239,800. Bids 9/9 rejected. CD 9/19—ENR 9/21, under LB.

†**Mississippi**—U. S. Eng., P. O. Box 60, Vicksburg, Sept. 14, 140,000 cu. yd. (net) earthwork along Potoccowa Creek, Item 2 L and R, Grenada and Carroll Counties, from L. Smith, P. O. Box 252, Lake Village, Ark., $34,580. CD 8/30—ENR 9/7.

†**N. M., Tucumcari**—Bureau Reclamation, Tucumcari, Sept. 9, Schedule 1, concrete aggregates, 5,500 yd. excav. and stripping, 4,500 tons preparing and stockpiling sand, 4,500 tons preparing and stockpiling coarse aggregate, from J. G. Shotwell, 324 S. Alsio St., Albuquerque, $49,185; Schedule 2, concrete aggregates, performing all work, 18,000 yd. excav. and stripping deposit, etc., from P. P. Lewellyn, Alamagordo, $86,868. CD 8/23—ENR 8/31.

CONTRACTS AWARDED

†**California**—U. S. Eng., 1209 S St., Sacramento, Zone 3, levee enlargement from Moulton Weir to Princeton, Butte City Rd., Spec. 942, Colusa and Glenn Counties, to Bressi & Bevanda Constr. Co., Inc., 6950 Tujunga Ave., North Hollywood, $273,238. Bids 9/8. CD 8/28—ENR 8/31.

†**Illinois**—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., repairing, reconstructing earthen levees, involving about 500,000 cu. yd. earth, constructing 3 gravity drainage structures, Vandalia and Divsely Drainage and Levee Dists., Fayette Co., NEG. 23-665-45-25, to J. Pohl, Nevada, Mo., $212,872. Bids 9/27.

†**Illinois**—U. S. Eng., 816 U. S. Courthouse & Custom House, St. Louis, 2, Mo., placing approx. 140,000 cu. yd. earth and repairing about 35,200 lin. ft. erosion in levee slopes in repairing levees at various locations, Greene Co., Neg. No. 23-665-45-24, to J. Pohl, Nevada, Mo. $74,220. Bids 9/2.

†**Illinois**—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., placing approx. 145,000 cu. yd. earth in repairing levees at locations where damaged by flood waters, Jackson Co., Neg. 23-665-45-29, to American National Const. Co., 314 N. Bway., St. Louis 1, Mo. Est. $50,000. Bids 9/16.

†**Illinois**—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., placing approx. 900,000 cu. yd. earth in repairing and rebuilding levees in St. Clair and Monroe Counties, to Samuel Kraus Co., 649 Edmund Ave., St. Louis 11, Mo., $245,000. Bids 8/30.

★†**Illinois**—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., placing 1,780,000 cu. yd. earth in repairing levees at various locations, Preston Drainage and Levee Dist., Union Co., Neg. No. 23-665-45-27, to R. B. Potashnick, Cape Girardeau, Mo., $510,800. Bids 9/11.

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, approx. 193,000 cu. yd. uncompacted earthwork, etc., on Mississippi River Levees, in Barataria and Lake Borgne Levee Dists., Solic. No. 16-047-45-11, Plaquemine Parish, to M. J. Wolfe, Maritime Bldg., New Orleans, $52,810. Bids 9/15, awarded 9/19. CD 9/5—ENR 9/7.

La., New Orleans—Orleans Levee Bd., Civil Courts Bldg., approx. 5,800 ft. levee revetment on west bank Mississippi River and 1,000 ft. levee revetment on east bank, same river, Orleans Parish, to L. P. Favret, 937 Gravier St., $39,850. Awarded 9/19.

Neb., Hay Springs—Mirage Flats Irrigation Project, c/o Farm Security Admin., 950 Bway., Denver, Colo., clearing land, leveling, erosion and weed control, farm supply laterals, farm irrigation, drainage structures, ditches, near here, to A. C. Ross Const. Co., Scottsbluff, $309,946. Bids 8/17.

†**Oregon**—U. S. Eng., 628 Pittock Block, SW 10 Ave. and Washintgon St., Portland, repairing revetments along Willamette River, Inv. 986, to Eldon & Dennis, 3101 N. Columbia Blvd., Portland, $46,000.

†**Ore., Eugene**—U. S. Eng., 628 Pittock Block, Sw. 10 Ave. and Washington St., Portland, repairing revetments along Willamette River, to Oscar Butler & Son, 4310 N.E. 42 St., Portland, $28,365.

Tex., Houston—City, drainage, force account. $72,000.

Tex., Houston—City, drainage ditch on Plum Creek, incl. lateral ditch in Oak Acres addn., to H. Cable, 2601 Grant St., $19,190. Est. $35,000. CD 9/12.

Tex., Marlin—Town, levee fills at water supply lake, to E. Fields, Calvert, approx. $15,000. Bids 9/12. CD 8/23—ENR 8/31.

†**Washington**—U. S. Eng., 500 3 Ave., Seattle, 4, dredging at mouth of Quillayute River, force account. $17,000.

LATIN AMERICA

Bolivia—Bolivian Development Co., La Paz, takes bids in October, constructing about 310 mi. hy. from Cochahamba to Santa Cruz; plans 300 mi. hy. from Sucre to Camiri.

British Guiana, Georgetown — Government of British Guiana, Georgetown, plans flying field construction and necessary meteoroligical and magnetic stations. About $500,000. Colonial Development & Welfare Bd., London, England, engr.

British Honduras, Belize—Government of British Honduras, will construct roads, by day labor. $800,000. Colonial Development & Welfare Bd., London, England, engr.

British West Indies—Government of Barbados, **Bridgetown**, plans flying field construction, necessary magnetic and meteorological stations, $500,000; Government of Trinidad, **Port Au Spain**, plans flying field construction and necessary meteorological and magnetic stations, $450,000. Colonial Development & Welfare Bd., London, England, engrs.

B. W. I., Barbados—Colonial Development & Welfare Administration, Bridgetown, plans 7 agricultural stations. $150,000.

Ecuador, Quito — Republic of Ecuador, Quito, plans irrigating 300,000 "sucres" in Tumbaco Valley and 2,300,000 "sucres" in provinces of Guayas and Manabi. Over $1,000,000. Ministry Pub. Wks., Quito, engr.

Guatemala, Guatemala City—Republic of Guatemala, Guatemala City, plans food warehouses in departments of San Marcos, Chimaltenanago, Guatemala, Santa Rosa Quiche, Quezaltanego, and Alta Verapaz. $280,000. Dpt. Agriculture, Guatemala City, archt.

Mexico—Celanese Mexicana, SA., Mexico City, probably takes bids in 3 months, constructing rayon cloth factory, near Lake Chapala, state of Jalisco. $6,000,000. H. Blancke, Mexico City, vice pres. and treas.

Mexico—Federal Agricultural Dpt., Mexico City, takes bids within 60 days, constructing small water systems in towns and irrigation work in suburbs in rice growing zones near Torreon. $450,000.

Mexico—Federal Health Dpt., Dr. Gustavo, Baz, secy., Mexico City, bids early in 1945, constructing hospitals throughout republic incl. medical center in Mexico City. $3,500,000.

Mexico—Mexican Federal Government, c/o Petroleos Mexicanos (Pemex), Mexico City, will construct 50 mi. 10 in. crude oil pipeline carrier, running over mountain pass, Mexico City area. Owner builds. $135,000. Engineer, c/o Dpt. P. Wks. & Comm., Mexico City. CD 6/8—ENR 6/22.

Mexico, Amecameca — State of Mexico, Governor Isidro Fabela, Toluca, takes bids within 100 days, WW sys. and drainage, sewage. $100,000.

Mexico, Ixmiquilpan—State of Hidalgo, Alberto Arteaga, head of committee, Pachuca, will construct irrigation dam, by own forces. $150,000.

Mexico, Lerdo—State of Durango, Governor Elpidio G. Velasquez, Durango, takes bids within 30 days, school. $250,000.

Mexico, Mazatlan—State of Sinaloa, Governor Pablo Macias, Culiacan, will construct dock, seawall and short railway, by own forces. $500,000.

Mexico, Mexico City—Alianza de Tranviarios, Dr. Lucio, 27, Mexico, D. F., plans home colony. $100,000.

Mexico, Mexico City—Almacenes Refrigerados, Humboldt, 44, Mexico, D. F., plans meat and vegetables refrigeration plant. $250,000.

Mexico, Mexico City—Ceramica Industrial El Aguila, Sidary Rovirosa, 100, Mexico D. F., plans factory for manufacture kaolin electric isolators. $100,000.

Mexico, Mexico City — Cia. Mexicana de Hielo Seco, S. A. Motolinia, 20, desp. 405, Mexico, D. F., plans dry ice factory. $250,000.

Mexico, Mexico City—Cromo Industrial, S. A. Nardo, 219, Mexico, D. F., plans arsenate of lead factory. $150,000.

Mexico, Mexico City — Federal District, Mayor Rojo Gomez, Mexico City, takes bids in October, constructing office bldg. Pensions Dept. at Juarez and Revillagigedo Aves., $1,000,000; bids within 30 days school center, in Colonia Gustavo A. Madero, $500,000; bids as soon as building material arrives, super-market on present site of San Juan Market, $250,000.

Mexico, Mexico City — Federal District, Mexico City, will construct and repair roads in Mexico City and suburbs incl. Coyacan, Cuajimalpa, Magdalena Conreras, Mixcoac, Aglarin, Claveria, Nativitas, Portales and San Simon, by own forces. $1,250,000.

Mexico, Mexico City—Mexican Light & Power Co. Ltd., Mexico City, plans power plant. $375,000.

Mexico, Mexico City—Plata Elegante, S. A., 5 de Mayo, 32, desp. 311, plans silver plate factory. $100,000.

Mexico, Nuevo Leon — State of Nuevo Leon, Governor Arturo B. de la Garza, Monterrey, plans schools. $750,000.

Mexico, Salinas Victoria—City, Leandro Villarreal, chn. Com., plans dam along Salinas River for irrigation, here and vicinity. $300,000.

Mexico, San Pedro de los Pinos—Fundiciones de Hierro y Acero San Pedro de los Pinos, D. F., plans production of steel products with electric furnaces. $210,000.

Mexico, Tepostlan — State of Morelos, Governor Castillo Lopez, Cuernavaca, will construct school, etc., by own forces. $165,000.

Mexico, Texcoco—Sosa Texcoco, S. A., Anastacio Sarabia, pres., Insurgentes and Villaneuva, Mexico, D. F., plans carbonate of soda and salt factory. $1,000,000.

Mexico, Topolobampo—State of Sinaloa, Governor Pablo Macias, Culiacan, plans school. $150,000.

Mexico, Tuxpan—City, Abraham Santamber, municipal pres., will construct docks, wharfs, piers, etc., by own forces. $110,000.

Mexico, Villa Madero—Municipal Government, Palacio Municipal, Mexico, D. F., plans school. $415,000.

PUBLIC BUILDINGS

PROPOSED WORK

†**Ariz., Buckeye**—School Dist. 33, Maricopa Co., 1 story, 40x80 ft. cafeteria, Ariz. 2-172-F, $16,200. **FWA.**

†**Ariz., Phoenix**—School Dist. 66, Maricopa Co., 1-classroom school., with pressure pump water sys., Ariz. 2-176-N. $10,500. **FWA.**

★†**Ark., Fayetteville**—Veterans Admin., Vermont Ave. between H and I Sts. NW., Wash., 25, D. C., hospital addns. $1,500,000.

†**Calif., El Centro**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, plans by Risley & Grould, 220 S. Westmoreland St., Los Angeles, 50 portable shelter units, Calif. 4883. CD 9/11—ENR 9/14.

†**Calif., Fetters Springs**—Federal Works Agency, 2223 Fulton St., Berkeley, Zone 3, plans by J. Clarence Felciano, 237 Talbot Ave., Santa Rosa, temporary type school, Calif. 4-629-F. $20,200. CD 8/30—ENR 9/7.

Calif., Long Beach—City Gas Dpt., City Hall, fuel dehydrator plant, $40,000. Swinerton & Walberg Co., 605 W. Olympic Blvd., Los Angeles, engr. S. E. Vickers, City Hall, city mgr.

†**Calif., Redwood City**—Federal Works Agency, 2223 Fulton St., Berkeley, Zone 3, plans by Narbett Chamberlain & Reynolds, 564 Market St., San Francisco, nursery school, Calif. 4-543-F. $20,700. CD 8/30—ENR 9/7.

†**Calif., San Diego**—City, fire station, Calif. 4-654-F. $13,100. **FWA.**

†**Calif., San Diego**—San Diego Unified School Dist. of San Diego Co., 5 room addn. to Chesterton Elementary School, Calif. 4-655-F. $42,000. **FWA.**

†**Conn., Waterbury**—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., completing plans grading, site imprvs., etc., housing, Conn. 6042. J. F. Whitney, Belden Hall, Wilton, archt.

★†**D. C., Wash.**—Georgetown University, 37 and O Sts. N.W., plans by Kaufman, Neal & Reid, Keystone Bldg., Pittsburgh, Pa., 400 bed hospital at Reservoir Rd., D. C., 49190. $1,400,000, incl. equip. **FWA.** CD 9/13—ENR 9/14.

★†**D. C., Wash.**—George Washington University, 2029 G St. N.W., plans by Faulkner & Kingsbury, 217 15 St. N.W., 400 bed hospital at Washington Circle, bounded by 22, 23 Sts. Pennsylvania Ave and I St. N.W., $2,700,000. **FWA.** CD 9/13—ENR 9/14.

†**Fla., Key West**—Bd. Pub. Instruction, Monroe Co., 1 story school, Fla. 4-126-F, $75,000. **FWA.**

†**Ga., Carterville**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Pine and Broad Sts., Atlanta bids soon, 40 trailers, incl. utilities, site imprvs., $175. G. C. Poundstone, Palmer Bldg., archt. CD 8/30—ENR 9/7.

PUBLIC BLDGS. (Proposed Work, Cont'd.)
...Chicago—Pub. Housing Auth., NHA, ... N. Wells St., Zone 6, 500 unit permanent ...mily housing, Ill. 2-3.
...Seneca—School Dist. 165, La Salle ...nty, 1 story, 10 classroom school, Ill. ...316 F. $96,578. FWA.
...Kokomo—Good Samaritan Hospital, ...story, bamnt., east wing, two addns. to ...th wing, alterations, St. Joseph Memorial ...spital, Ind. 12-200-N. $195,000. FWA.
...Kan., Lawrence—University of Kansas, ...room addns., alterations war nursery, Kan. ...345-N. $5,500. FWA.
...Mich., Bay City—Dow Chemical Co., Mid- ...nd, addnl. plant bldg. Approx. $36,000. ...ense Plant Corp. will finance.
...Minn., Melrose—Village, sketches made by ...ng & Thorshov, 1200 2 Ave. S., Minne- ...olis, power plant, new equip. Over $40,000. ...D. Thomas & Associates, 1200 2 Ave. S., ...inneapolis, engrs.
...Miss., Pascagoula—Pascagoula Rural Sep- ...rate School Dist., 1 story, modified type E ...tandard 16 classroom Junior High School, ...n. 22-210-F. $174,318. FWA. Hedrick ...Lindsley, Inc., 711 Main St., Houston, Tex., ...rchts. CD 9/11—ENR 9/14.
...N. Y., Kew Gardens—Sylvania Electric ...roducts, Inc., 500 Fifth Ave., New York, ...ce 18, soon lets contract altering En- ...neering Research and Development Sec- ...n Bldg., for U. S. Navy. The Austin Co., ...Rector St., New York, Zone 6, archts.
...O., Akron—Pub. Housing Auth., NHA, ...11 E. 9 St., Cleveland, Zone 15, plans by ...ood & Wagner, 200 Permanent Bldg., 100 ...mit temporary family dwellings, Ohio 23299. ...D 9/7—ENR 9/14.
...O., Ashtabula—Pub. Housing Auth., NHA, ...11 E. 9 St., Cleveland, Zone 15, 25 unit ...mily stop-gap housing, Ohio 23303; 30 ...it single person stop-gap housing, Ohio ...3304.
...O., Cleveland—Cleveland Transit System, ...J. McCarter, chn. Bd., 1404 E. 9 St., ...tches by A. C. Wolf, Swetland Bldg., bus ...rage and repairs shop, $250,000.
...O., Wadsworth—Pub. Housing Auth., ...HA, 2073 E. 9 St., Cleveland, Zone 15, 54 ...it single person stop-gap housing, O. 33302.
...Ore., Gilbert Station—School Dist. 45, ...ltnomah Co., 2 classroom school addn., ...re. 35-185-N. $16,344. FWA.
...Pa., Bristol—Kaiser Cargo, Inc., Bristol, ...dnl. plant bldgs. Approx. $270,000. De- ...se Plant Corp. will finance.
...Pa., Ephrata—Boro Manager, Boro Hall, ...E. Locust St., making plans, power house ...dn., alterations, Church Ave. $300,000. ...eis T. Klauder & Assoc., Lincoln-Liberty ...dg., Phila., engrs.
...Pa., Gettysburg—Gettysburg School Bd., ...o L. Keefauver, supt., plans by J. B. ...amme, York, 2 story, bamnt., brick, steel ...nior High School. $350,000.
...Pa., New Castle—Pub. Housing Auth., ...HA, 270 Bway., New York, 7, N. Y., 350 ...it family stop-gap housing, Pa. 36446.
...Pa., Phila.—Dpt. Welfare, Capitol Bldg., ...Harrisburg, bids soon kitchen bldg. on ...yberry Grounds. $500,000. H. A. Kuljian ...Co., 1518 Walnut St., archts. CD 8/4— ...NR 8/10.
...R. I., Newport—Federal Works Agency, ...Chauncy St., Boston, Mass., bids soon, ...creation bldg., addn. to dormitory, W. ...way. $45,000. Noel & Miller, 6 Catherine ..., archts. CD 8/14—ENR 8/17.
...Tex., Fort Sam Houston—U. S. Eng., Fort ...m Houston, warehouse expan., addns. for ...my Services Depot. Serial No. W-41-154- ...-29. Over $40,000.
...Va., Newport News—City, 2 story, mason- ..., concrete health center, Va. 44-276-N. ...59,400. FWA.
...Va., Portsmouth—Norfolk County School ..., 148 Granby St., Norfolk, bids soon ...adock High and Elementary School addn., ... 44-163. $254,000. FWA. J. B. Walford, ...3 Cary St., Richmond, archt. CD 8/30— ...NR 9/7.
...Wash., Auburn—School Bd., plans by W. ...allis, Lyon Bldg., Zone 4, Seattle, school and ...nior High School addn., Wash. 45-302-N. ...20,000. FWA. CD 9/13—ENR 9/21.
...Wash., Bellingham—Whatcom Co., Court- ...house, bond election Nov. 7, courthouse. ...00,000.
...Wash., Kennewick—School Bd., school ...da. $140,000. Seeking FWA funds.
...Wash., Port Townsend—School Dist. 48, ...erson County, 1 story child care center, ...ash. 45-303-N. $30,000. FWA.
...Wash., Renton—Pub. Housing Auth., ...HA, Skinner Bldg., Seattle, Zone 1, plans ...G. W. Stoddard, Orpheum Bldg., Seattle, ...ne 1, building for child care center at ...nton Highlands housing, Wash. 45-303-F. ...,000. CD 9/22.

†**Wash., Sumner**—School Bd., plans by Mock & Morrison, Perkins Bldg., Tacoma, school addn. for nursery school use, Wash. 45-297-N. $43,000. FWA. CD 9/23.

Wash., Vancouver—St. Joseph's Hospital, Vancouver, plans by J. W. Maloney, Larson Bldg., Yakima, 2 story, bamnt., rein.-con. nurses home addn. $150,000. Applied to FWA.

Wis., Barron—City, made preliminary plans power plant, equip. Over $50,000. R. D. Thomas & Associates, 1200 2 Ave. S., Minneapolis, engrs.

Puerto Rico, Catano—Puerto Rico Housing Auth., San Juan, plans low-cost housing. $400,000.

Alta., Medicine Hat—Municipality, power plant and equip. exten. $200,000.

B. C., Kimberley—Province of British Columbia, Victoria, home for old people. $200,000. Dpt. P. Wks., Victoria, engr.

N. B., Chatham—Municipality, J. J. Duffy, town clk., bus terminal and repair shop. $50,000.

N. B., Saint John—City and St. John County, John G. Teed, chn., plans nearing completion by Alward & Gillies, 1 Market Sq., health centre, Waterloo and Hospital Sts.

★**N. S., Halifax**—Dpt. Pub. Wks., Ottawa, Ont., plans by Ross & Mac Donald, 1010 St. Catherine St. W., Montreal, Que., permanent hospital to partly replace Camp Hill Hospital. $700,000-$1,000,000. CD 8/14.

N. S., Halifax—Municipality, boiler house at City Home. $60,000.

Ont., Peterboro—City, J. Jepson, mgr., Mason Food Stores, Peterboro, memorial health and athletic centre. $350,000.

Ont., Preston—Citizen's Committee, W. J. Pelz, mayor, 200 bed hospital to serve Galt, Preston and Hespeler. $300,000.

Ont., Stratford — Province of Ontario, Toronto, repair workshop and garage. $40,-000. Dpt. Hys., Parliament Bldg., Toronto, engr.

★**Ont., Toronto**—Municipality, 300 prefabricated type houses. $720,000.

★**Ont., Toronto**—Secretary Dpt. P. Wks., Ottawa, Ont., 850-bed active treatment unit, $1,000,000 and 100-bed observation unit, $300,000 both at Sunnybrook Hospital, Sunnybrook Farm. CD Sutherland, c/o Dpt. P. Wks., Ottawa, archt.

Ont., Waterloo—Waterloo Public Utilities Co., unit type sub-station, outdoor one with outdoor oil breakers, changing volt lines. $45,000.

Que., Gaspe—Province of Quebec, Quebec City, fisheries school, Dpt. Game & Fisheries, Quebec City, engr.

Que., Lachine—City, 50 to 60 houses at Stony Point. $175,000-$210,000.

Que., Montreal—Habitations Montrealises Incorpee, c/o F. T. Collins, 215 W. St. James St., housing. $150,000.

Que., Montreal—Municipality, J. A. Mongeau, city clk., combined police and fire station. $200,000.

Sask., Regina — Province Saskachewan, Regina, plans by Dpt. P. Health, Regina, diabetic health centre and laboratory. $150,000.

BIDS ASKED

Bids Asked October 3

D. C., Wash. — District Comrs., District Bldg., Engine House 14 at North Capital and Crittenden Sts., N.E. $100,000.

†**Wis., Kenosha**—Nash-Kelvinator Corp., 5626 25 Ave., 1 story, 200 x 250 ft., brick, steel Factory Bldg. 39, addn., concrete fdn. Defense Plant Corp. will finance. Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, Mich., archts. E. W. Bernitht, c/o owner, engr.

Bids Asked October 4

N. Y., Poughkeepsie—Dpt. Mental Hygiene, Albany, Chemical Storage Bldg. 771, at State Hospital. Plans deposit $5. Comr. Architecture C. J. White, State Office Bldg., Albany, archt.

Bids Asked October 5

†**Wash., Forks**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave and Union St., Seattle, Zone 1, 20 unit family housing, Wash. 45271. Extended date. V. N. Jones, Republic Bldg., Seattle, Zone 1, archt. CD 9/13—ENR 9/14.

Bids Asked October 9

†**Mich., Detroit** — Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland 15, O., 1,000 temporary family dwellings, Mich. 20237. Plans deposit $25. Eberle Smith, Murphy Bldg., archt. CD 9/7—ENR 9/14.

Bids Asked October 10

†**Ga., Marietta**—Bd. Educ., Town Hall, school, Ga. 9-302-F. FWA. Extended date. R. R. Nash, Moxley Bldg.; archt. CD 9/19—ENR 9/21.

†**Va., Newport News**—Public Bldg., Admin., 18 and F Sts. N.W., Wash. 25, D. C., dormitory, Va. 44-354, for Helen Buxton Training School for Nurses, Inc., Newport News. FWA. Extended date. Williams, Coile & Pipino, 408 Melson Bldg., archts. CD 9/7—ENR 9/14.

Bids Asked November 8

★†**Pa., Lebanon**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D. C., hospital. $3,006,000. Extended date. CD 9/5—ENR 9/7.

Bids Asked

†**Mass., Fort Devens**—U. S. Eng., 31 St. James Ave., Boston, (selected list bidders), bldg. alterations, addns., No. 19-023-45-NEG 34. $95,000.

LOW BIDDERS

†**Md., Aberdeen Proving Ground**—U. S. Eng., Standard Oil Bldg., Baltimore, X-ray bldg., from R. S. Herzog, 1505 Race St., Phila., Pa., $183,485. CD 9/14—ENR 9/21.

†**Calif., San Pedro**—Housing Auth., City of Los Angeles, 1401 E. First St., Los Angeles, Sept. 19, site development for 1,000 temporary dwelling units, Calif. 4377, for NHA, from Wesco Constr. Co., 2000 Hyperion Ave., Los Angeles, $403,990. CD 9/11.

†**Conn., Groton**—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., Sept. 18, erosion control, Starr Hill housing, Conn. 6014, from N. Benvenuti & Sons, 16 Elm St., New London, $27,215. CD 9/14.

†**Ill., Chicago**—Bd. Educ., 228 N. La Salle St., Sept. 15, general contract, 2 story, 67x 190 ft., brick, concrete Gillespie School addn., alterations, and 2 story, 67x124 ft., brick, concrete, steel school, 99 and Crandon Sts., Ill. 11-340-N, from Thorgerson & Erickson Co., 228 N. La Salle St., $165,040. FWA. CD 9/7—ENR 9/14.

Ind., Evansville—J. Grady, trustee Knight Twp., 2151 Division St., Sept. 12, 1 story, 99x277 ft. Vogel School Booneville Hy. between Oak Hill Rd. and Weinbach Ave. and 1 story, 62x119 ft. Burkhardt School, Booneville Hy. and Burkhardt Rd., from Aalco Constr. Co., P. O. Box 14, Newburg, $194,987. CD 7/1—ENR 7/30.

★†**Utah, Ogden**—Order of St. Benedict, St. Joseph, Minn., at hospital in Ogden, Sept. 18, 3 story, 31x108 ft., rein.-con. brick hospital, Utah 42-178-N, from W. C. Smith, Inc., 411 W. 5 St., Los Angeles, Calif., $675,000. FWA. CD 8/23—ENR 8/24.

†**Utah, Ogden**—Order of St. Benedict, St. Joseph, Minn., at hospital, at Ogden, Sept. 21, 2 story, 69x272 ft., brick, rein.-con. nurses home, Utah 42-178-N, from W. C. Smith, Inc., 717 Title Guarantee Bldg., Los Angeles, Calif., $236,890. FWA. CD 8/22—ENR 8/24.

†**Va., Charlottesville**—University of Virginia, Charlottesville, Sept. 19, part 4 story, bamnt., part 3 story, nurses home addn., Va. 44-358, from Graham Bros., Mutual Bldg., Richmond, $214,244. FWA. CD 8/30—ENR 9/7.

★†**Wis., Merrimac**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago 6, Ill., Sept. 21, 250 unit temporary dwellings, Wis. 47080, from Benjamin Chemers Co., 111 W. Washington St., Chicago, Ill., $555,000. Law, Law, Potter & Nystrom, 121 S. Pinckney St., Madison, archts.

CONTRACTS AWARDED

★†**Ark., North Little Rock** — Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D. C., addnl. bldg., utilities, etc., to William R. Goss Constr. Co., 435 N. Michigan Ave., Chicago, Ill., $1,695,000. Bids 9/19, awarded 9/23. CD 9/21, under LB.

★†**Calif., Camp Joseph H. Pendleton (br. Oceanside)**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., 300 steel arch-rib huts and asphaltic concrete roads and area paving, NOY 10683, to Haddock Engineers, Ltd., 605 W. Olympic Blvd., Los Angeles, approx. $1,200,-000. CD 9/12—ENR 9/14.

†**Calif., Hunters Point**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., torpedo storage bldg., U. S. Naval Drydocks, Spec. 14050 (Part A), NOY 9528, to Carl N. Swenson Co., 55 New Montgomery St., San Francisco, $52,333. CD 8/18.

★†**Calif., Long Beach**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., dependent's facilities and Waves barracks, at Naval Hospital, Spec. 24383, NOY 9916, to W. C. Smith, Inc., 411 W. 5 St., Los Angeles, $539,443. Bids 9/6. CD 9/11, under LB.

★†**Calif., Port Chicago**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., 6 barracks, laundry, dry cleaning, subsistence and provisions and storage bldgs., roads, utilities, etc., Naval Magazine, Spec. 14736, NOY 10315, to Parker, Steffens & Pearce, 135 South Park St., San Francisco, $762,675. CD 9/12, under LB.

PUBLIC BLDGS. (Contracts Awarded, Cont'd).

†**Ind., Crane**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., tanking bldg. and attendant facilities, Naval Ammunition Depot, NOY 10065, to Maxon Constr. Co., Inc., 131 N. Ludlow St., Dayton, O., $166,619.

★†**Ind., Crane**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., four 1 story ordnance storehouses, Naval Ammunition Depot, NOY 10079, to Maxon Constr. Co., 131 N. Ludlow St., Dayton, O. $1,014,000. CD 9/18, under LB.—ENR 4/27.

★†**Ind., Indianapolis**—Allison Engine Division, General Motors Corp., General Motors Bldg., Detroit, Mich., 1 story, brick, concrete test cells, to National Concrete Fireproofing Co., Citizens Bldg., Cleveland, O. Est. $1,000,000. Defense Plant Corp. will finance. CD 9/6—ENR 9/14.

Mich., Homer—Bd. Educ., school, to Earl H. Beckering, 2140 Horton St. S.E., Grand Rapids, $230,000. Bids 8/24. CD 8/15—ENR 8/17.

†**Mo., St. Louis**—U. S. Eng., 816 U. S. Courthouse & Customhouse, Zone 2, architectural and structural portions 3 bldgs. above concrete fdns., extensive alterations to 2 bldgs., necessary alterations to 1 bldg. to permit construction work, yard crane columns and runways, miscellaneous site imprvs., NEG. 23-065-45-28, to Alport-Carlo Constr. Co., Title Guaranty Bldg., 7 and Chestnut Sts., Zone 1, $349,819. Bids 9/15.

†**N. C., Cherry Point (Br. New Bern)**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., Marine Corps Bank bldg., fire station, post office addn., laundry exten., Marine Corps. Women's Reserve headquarters addn., combat pools addns, NOY 10403, to T. A. Loving & Co., Goldsboro, $148,900. Bids 9/6, J. C. McKenzie, 5 E. 57 St., New York 22, N. Y., archt.

†**N. C., Fort Bragg**—U. S. Eng., Post Office Bldg., Savannah, Ga., addnl. ammunition storage facilities, Brag-1-45, to R. F. Kirkpatrick & Sons, Burlington, $32,597. Bids 9/18. CD 9/12.

O., Newton Falls—City, H. Spencer Hoak, clk., City Hall, equip. increasing capacity electric light plant, to Fairbanks Morse & Co., 2810 Superior Ave., Cleveland, $44,110. J. Simon & Assoc., Central Bldg., Van Wert, consult. engrs.

†**Tex., Benbrook**—U. S. Eng., 231 W. Main St., Denison, temporary frame bldgs., Aircraft Plant 4, Contr. W-41-242-ENG-310, to R. F. Ball Constr. Co., Inc., 400 Burton St., Houston, $396,983.

†**Tex., Fort Worth**—American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, New York, N. Y., addnl. chemical plant mfg. unit. Owner builds. $160,000. Defense Plant Corp. will finance. CD 6/12—ENR 6/15.

†**Va., Quantico**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., laundry and equip., U. S. Naval Hospital, NOY 7545, to Eugene Simpson & Bros., 2 W. Walnut St., Alexandria, $110,124.

★†**Va., Yorktown**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., reconstruction, alterations, addns., Navy Mine Depot, Spec. 13700, NOY 9137, to Doyle & Russell, Central Natl. Bank Bldg., Richmond, $1,675,220. Bids 8/24. CD 9/6, under CA.

★**Ont., Toronto**—Secretary Dpt. P. Wks., Ottawa, Ont., military hospital at Sunnybrook Farm, North York, to Redfern Constr. Co. Ltd., Excelsior Life Bldg., $2,837,000. Bids 7/26. CD 8/1—ENR 8/3, under LB.

COMMERCIAL BUILDINGS

PROPOSED WORK

Mass., South Lancaster—Atlantic Union College, Flagg St., bids in spring 2 story, 46x175 ft. and 43x60 ft. brick, steel administration bldg. $150,000. Ronald Senseman, Carroll Ave., Takoma Park, Wash., D. C., engr. CD 6/26—ENR 6/29.

N. J., Hillside—B.H.B. Constr. Co., 163-18 Jamaica Ave., Jamaica, N. Y., sixteen 3 story, 160 unit brick veneer garden apartments, Fabyan Pl.

N. C., Raleigh—Wm. H. Dietrick, archt., 115 W. Morgan St., soon lets contract hospital addn., St. Marys St., for Bd. Trustees Rex Hospital, Inc., Geo. L. H. White, chn., 17 W. South St. $150,000.

★**O., Cleveland**—Oheb Zedek Congregation, H. Zupnick, pres., Parkwood Dr. and Monson Ave., brick, steel, concrete church, and school. $500,000. Site purchased.

O., Hamilton—Aluminum Industries, Inc., 2438 Beekman St., Cincinnati, cafeteria and locker. $150,000.

Okla., Tulsa—Hillcrest Memorial Hospital, 1653 E. 12 St., plans by L. Senter, Philtower Bldg., nurses' home. $150,000. Applied to FWA.

Pa., Lock Haven—Young Men's Christian Assn., Lock Haven, plans by Huntingdon-Davis, Dunnells, Century Bldg., Pittsburgh, altering, remodeling concrete, steel YMCA bldg. $175,000.

Tex., Gonzales—B. P. O. E. Elks, 320 Crawford St., Houston, soon lets contract bldgs., swimming pools, etc., for crippled children. $175,000. CD 6/21—ENR 6/29.

N. S., Halifax—R. C. Archdiocese of Halifax, c/o Archbishop J. T. McNally, Halifax, reconstructing St. Mary's Hospital. $200,000.

Ont., Chatham—Chrysler Corp. of Canada, Windsor, 2 story, brick office. $150,000.

Que., Lake Megantic—Hospital Saint Joseph du Lac Megantic, c/o Reverend Sister Marie de Saint Louis, Marianites de Ste. Croix, St. Vincent de Paul Institute, 261 S. Bway., Tarrytown, N. Y., U. S. A., hospital. $150,000.

Que., Montreal—Builders Society District Council, c/o A. Martel, 1182 Blvd. St. Lawrence, plans by D. Shennan, 606 Cathcart St., labour temple, St. Lawrence Blvd. $150,000.

Que., Quebec City—Victoria Theatre, Ltd., 27 Palace Hill, plans by architect, c/o C. Vance, 27 Palace Hill, theatre. $150,000.

Que., St. Simeon—Canada Steamship Lines, Ltd., 715 Victoria Sq., Montreal, plans by D. Shennan, 606 Cathcart St., Montreal, hotel. $400,000.

CONTRACTS AWARDED

Ala., Montgomery—Engel Realty Co., 1921 1 Ave. N., Birmingham, thirty-nine 1 story, brick veneer houses, to D. T. Underwood & Son Constr. Co., 641 Martin Bldg., Birmingham, $225,000. H. Pembleton, 2121 Highland Ave., Birmingham, archt. CD 8/24—ENR 8/31.

Ariz., Scottsdale—R. T. Evans, Route 1, Phoenix, 2 story, concrete block Paradise Inn, at Winter Guest Ranch, to Shumaker & Evans Constr. Co., 3000 N. Central Ave., Phoenix, $156,000.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Calif., Los Angeles—PLANT—Dillingham Printing Co., Inc., 4837 Huntington Dr. North, bids soon brick printing plant, $50,000. Geo. J. Fosdyke, 112 N. Main St., engr.

Conn., Middletown — ABATTOIR — East Haven Packing Co., Inc., River St., plans by Wm. T. Towner, 164 Court St., 2½ story, 35x100 ft. brick, steel, concrete abattoir. $40,000.

Conn., New London—GARAGE, etc.—Sortor Chevrolet Co., 90 Garfield Ave., brick, steel, concrete garage, sales and service showroom, Colman and Broad Sts. Over $40,000.

Fla., Jacksonville—RAILWAY BLDGS.—Seaboard Air Line Ry., W. D. Simpson, ch. engr., S A L Ry. Bldg., Norfolk, 10, Va., extens. 3 bldgs., Bay St. $50,000.

Md., Baltimore — PLANT — Schluderberg-Kurdle Co., Baltimore and Eaton Sts., soon lets contract 3 story, 96x116 ft. beef killing plant, rein.-con. $200,000. Henschien, Everds & Crombie, 59 E. Van Buren St., Chicago, Ill., archts.

Mass., Charlestown (Sta. Boston)—FACTORY, etc. — Davidson Rubber Co., 50 Brighton St., soon lets contract 1 story, 35x77 ft. and 55x150 ft. brick, steel, concrete factory and office bldg. $55,000. Extended date. A. B. Reed, 88 Broad St., Boston, archt. CD 9/12—ENR 9/14.

Minn., Cambridge — POWER PLANT — Rural Cooperative Power Assn., Maple Lake, sketches by Long & Thorshov, 1200 2 Ave. S., Minneapolis, brick, tile, structural steel, glass block power plant and equip. $65,000. REA. R. D. Thomas & Associates, 1200 2 Ave. S., Minneapolis, engrs.

N. J., Livingston—PLANT—Ernest Water Column & Gage Co., Livingston, soon lets contract 1 and 2 story, brick veneer on concrete block plant addn. Willard Wanda, 309 Bloomfield Ave., Caldwell, archt.

★**N. Y., Bainbridge**—FACTORY—Casein Co. of America, Div. of Borden Co., 350 Madison Ave., New York, Zone 17, soon lets contract altering factory bldgs. and new factory. $545,000. Skidmore, Owings & Merrill, 5 E. 57 St., New York, Zone 22, archts. CD 9/11—ENR 9/14.

N. Y., Batavia—PLANT—Ryan-Dewitt Petroleum Distributing Corp., J. M. Ryan, pres., Pearl and River Sts., rebuilding portion bulk distr. plant, installing 5 steel storage tanks, accessory equip., etc. Over $40,000.

N. D., Crosby—PLANT—Farmer Union Elevator Co., N. Bjella, mgr., Crosby, bids soon elevator and locker plant. $35,000.

O., Cleveland—FACTORY—Cuyahoga Soap Co., A. W. Stadler, pres., 808 Denison Ave., rebuilding 2 story, bsmnt., brick, steel factory bldg. $50,000.

★**O., Dayton**—FACTORY—Inland Mfg. Div. of General Motors Corp., 2727 Inland St., 2 story, brick, steel, concrete factory bldg., addn. $1,071,787.

Ore., Astoria—REPAIR SHOP—St. Dillard Motor Co., Stephen and Douglas Sts., repair shop. $61,000.

Ore., Portland—COLD STORAGE, etc.—Interstate Association Creameries, 1319 S.E. 12 Ave., plans by Ertz & Burns, Pittock Block, 2 story, 100 x 100 ft., rein.-con. cold storage and processing plant. $75,000.

Pa., East Pittsburgh — WAREHOUSE — Westinghouse Elec. & Mfg. Co., J. D. Georg in charge, 700 Braddock Ave., sketches warehouse alterations, storage platforms, concrete truck runways, ramps, etc. $190,000.

Pa., Ridgway—STORAGE—G. D. William c/o Kennedy & Co. Invest. Brokers, Law Title Bldg., Phila., altering present bldg. into 2 story, bsmnt., 50x80 ft. zero storage bldg. and rental lockers. $50,000.

S. C., Columbia—ENGINE SHED—Atlanti Coast Line R. R., R. W. Marye, ch. engr., Wilmington, N. C., soon lets contract frame shed, mechanical facilities, at shopyards.

Tenn., Clarksville — FACTORY — B. F. Goodrich Co., c/o C. R. Spencer, Clarksville, and J. A. Scott, 500 S. Main St., Akron, O., factory addn. $350,000.

Tex., Dallas—WAREHOUSE—L. A. Friester & Co., 1100 Cadiz Ave., 1 story, 77x10 ft., brick, concrete, cast stone warehouse, $40,000. M. Peterman, 5230 Monticello Ave., engr.

Tex., DeLeon—PLANT—Ross & Thiebaud DeLeon, postponed bids to have been opened Sept. 14, frozen food locker and processing plant. P. G. Bentley, 407 Burt Bldg., Dallas, engr. CD 9/6—ENR 9/14.

Tex., Donna—PROCESSING PLANT—Va Verde Products Co., Weslaco, 2 story fruit processing plant unit, brick, rein.-con. $40,000.

Tex., Fort Worth—PLANT—Swift & Co., E. Exchange St., bids soon packing plant bldg. $150,000. CD 8/10—ENR 8/17.

Tex., Goldthwaite—FROZEN FOOD LOCKER AND PROCESSING PLANT—Mills County Locker Corp., Goldthwaite, rejected bids Sept. 18, frozen food locker and processing plant. Thos. D. Broad, Burt Bldg., Dallas, archt. CD 9/20.

Tex., Houston—REFINERY—Shell Oil & Refining Co., Deer Park, Houston, plans by W. S. Kubight, Deer Park, Houston, 44x14 ft., concrete, hollow tile, brick, steel refining plant addn. Over $40,000.

Tex., LaPorte—PLANT CHIMNEY—E. I. DuPont de Nemours & Co., LaPorte, 150 ft. rein.-con. chimney for chemical plant. Over $40,000.

Tex., Raymondville—PLANT—Delta Canning Co., Raymondville, 2 story, concrete, hollow tile processing plant addn. $40,000.

Tex., San Antonio—WAREHOUSE—Merchants Ice & Cold Storage Co., 1305 E. Houston St., soon lets contract 104x145 ft., rein.-con. warehouse, hollow tile walls, etc. Over $45,000. W. E. Simpson Co., 1445 Milam Bldg., engr.

Tex., San Antonio—WAREHOUSE—Peaslee-Gaulbert Corp., 1502 S. Almo St., 1 and 2 story, 125x225 ft., concrete warehouse, W. E. Simpson Co., 1445 Milam Bldg., engrs.

Tex., San Benito—PLANT—C. D. Kirk Co., 725 S. Sam Houston St., 1 and 2 story, brick, concrete processing plant, $40,000. CD 1/17—ENR 1/20.

Tex., Seminole—PLANT—Southern Carbon Co., Seminole, carbon black plant. $300,000.

★**Wash., Seattle**—OIL REFINERY—North Pacific Pipe Line Co., Billings, Mont., oil refinery, 35,000 bbl. initial cap. $5,000,000.

Wash., Tacoma — SHOP, etc. — Chicago, Milwaukee, St. Paul & Pacific R. R. Co., W. H. Penfield, ch. engr., Union Sta., Chicago, 6, Ill., 2-stall shop with 2 concrete inspection pits and washing and locker bldg. $146,000.

W. Va., Page—COALING STATION—Virginia Ry. Co., A. M. Traugott, ch. engr., Terminal Bldg., Norfolk, Va., 300 ton steel coaling station. $45,000.

Wis., Stevens Point—FACTORY—Lullaby Furniture Co., Stevens Point, plans by F. Spalenka, 432 Normal Ave., 3 and 4 story, 80x149 ft., brick, glass block factory addn.

Alta., North Battleford—GAS PLANT, etc. —Community Services, Ltd., North Battleford, gas plant and necessary piping, $100,000.

B. C., Nanaimo—PLANT—F. W. Wilfert & Co. Ltd., 97 Commercial St., woodworking, shingle mill, sash and door factory. $50,000.

B. C., Vancouver—PLANT—B. C. Dehydrators Ltd., Suite 1500, Royal Bank Bldg., 625 vegetable, grain, etc. dehydrating plant. $50,000.

INDUSTRIAL BLDGS. (Proposed Work, Cont'd.)

B. C., Vancouver—MILL—Western Plywood Co., Ltd., c/o J. Bene, c/o Pacific Coast Co., Ltd., New Westminster, mill. $40,000.

B. C., Vancouver—PLANT—Western Vinegar, Ltd., 1365 Powell St., plans by Mercer & Mercer, 615 W. Hastings St., 2 story, 66x115 ft. brick, frame plant. $70,000.

N. B., Saint John—PLANT—Export Box Co., Ltd., St. John, plant. $40,000.

Nfld., Belle Bay—PLANT—Newfoundland Dehydrating Process Co., Ltd., St. John's, plant. $40,000.

Ont., Beeton — FACTORY — Vita Cereal Products Co., Ltd., Beeton, factory. $40,000.

Ont., Flanders—PLANT—Ontario Minnesota Pulp & Paper Co., Ltd., Flanders, plant addns. $50,000.

Ont., Leaside (Postal Dist. Toronto)—PLANT—Canada Wire & Cable Co., Ltd., Leaside, plans by D. E. Kertland, 34 Summerhill Gardens, Toronto, plant addn. $45,000.

Ont., Midland—PLANT—Dorel Mfg. Co., Ltd., c/o E. M. Shaw, Midland, truck, tractor, farm machinery, etc. mfg. plant. $40,000.

Ont., Minden—MILL—Hyland Lumber Co., Ltd., Minden, saw mill and associated plant construction. $40,000.

Ont., Peterborough — PLANT — Beck & Gadie, archits., 230 Bloor St. W., Toronto, plans let contract 22x176x433 ft., steel, brick plant, Park and Wolfe Sts., for Canadian General Electric Co., Ltd., 212 King St. W., Toronto. $458,950.

Ont., Toronto—FACTORY—Arad Textile Mills, Ltd., c/o H. M. Sherman, 1657 Bathurst St., factory. $40,000.

Ont., Toronto—FACTORY—F. H. Cunningham Signs Ltd., 61 Elm Grove Ave., plans completed by C. W. Smith, 602 Jane St., 1 story, bsmnt., 39x114 ft. concrete block, brick factory. $45,000.

Ont., Toronto—PLANT—John T. Hepburn, Ltd., 18 Van Horne St. plans completed by Govan, Ferguson & Lindsay, 515 Jarvis St., altering, plant superstructure addn. Dupont St. and Ossington Ave. $100,000.

Ont., Toronto—FOUNDRY—Pivot Industries Ltd., c/o E. W. V. Starnaman, 54 Tilden Rd., foundry. $40,000.

Ont., Windsor—PLANT—Canadian Toledo Scale Co., Ltd., Windsor, plant addn. $50,000.

Ont., Windsor — MANUFACTURING — Chambers & Patterson Ltd., engineering equip., precision tools, etc. mfg. plant. $40,000.

P. E. I., Summerside—FACTORY—International Fox and Animal Foods, Ltd., Summerside, factory. $40,000.

Que., Beauceville — PLANT — McColl Frontenac Oil Co., Ltd., 1010 W. Ste. Catherine St., Montreal, bulk storage plant and tanks. $50,000.

Que., Beloeil—PLANT—Modern Fur Dressing & Dyers Co., Ltd., Beloeil, dyeing, cleaning, etc., plant. $40,000.

Que., Duparquet — REHABILITATING MINE—Beattie Gold Mines Quebec, Ltd., 347 W. King St., Toronto, rehabilitating mine and other development. $500,000.

Que., La Providence — PLANT — Adelou Jacques, Ltd., 1 St. Michel St., reconstructing 60x150 ft., cement block, organ mfg. plant, concrete fdn. $45,000. CD 7/19— 8/3.

Que., Montmagny — FACTORY — Biscuits Montmagny, Inc., Montmagny, biscuit, cake, etc., factory. $50,000.

Que., Montreal—FACTORY—Kiddies Togs Mfg. Co., Ltd., 5220 Blvd. St. Laurence, plans by L. N. Booth, 358 Carlyle Ave., Mount Royal, factory. $40,000.

Que., Murray Bay—RAILROAD STATION—Canadian Natl. Rys., H. A. Dixon, ch. engr. (Oper.), 360 McGill St., Montreal, railroad station. $50,000.

Que., Three Rivers—FACTORY, etc.—Leopold Duplessis, Inc., Three Rivers, sash and door factory and plant addn. $40,000.

BIDS ASKED

Bids Asked October 3

Wis., Barron—SUB-STATION—Barron Co. Electric Co-op., sub-station, REA Proj. Wisc. 3-Barron Substation. Wisconsin Electric Power, 302 E. Wilson St., Madison, engr.

Bids Asked

Conn., Bridgeport — PLANT — Whipple & Choate Co., 934 South Ave., (local bidders) laundry plant, Iranstan and South Aves. $1,400. Westcott & Mapes, Inc., 139 Orange St., New Haven, engrs. CD 9/8—ENR 9/14.

Conn., Fairfield—TRUCK TERMINAL—Associated Transport, Inc., c/o Albert J. Carson, archt., 826 Memorial Ave., West Springfield, Mass., steel truck terminal. $40,000. CD 9/9—ENR 9/7.

Tex., La Gloria—RECYCLING PLANT—(Magnolia Petroleum Co., 1319 Kinney Ave., Sinclair Refining Co., Navigation Blvd., both Corpus Christi, and Transwestern Oil Co., Milam Bldg., San Antonio (selected list bidders), large recycling plant. $1,000,000.

Ont., Owen Sound—FACTORY—J. C. Weaver, secy. North Grey Cheese Cooperative Co., Ltd., Owen Sound, reconstructing 2 story, bsmnt., 54x194 ft., block wall factory, concrete fdns., 2nd Ave. N. $55,000. Marglson & Babcock, 137 Wellington St. W., Toronto, engrs. CD 9/8—ENR 9/14.

CONTRACTS AWARDED

Ariz., Winslow—ROUNDHOUSE—The Atchison, Topeka & Santa Fe Ry. System, M. C. Blanchard, ch. engr. (Coast Line) 660 S. Main St., Los Angeles, Calif., repairing roundhouse, replacing wood platforms with concrete, to Robert E. McKee, 4700 San Fernando Rd. W., Los Angeles, Calif.

Calif., Azusa — FACTORY — Aerojet Eng. Corp., 285 W. Colorado St., Pasadena, 6 frame, stucco factory bldgs. Owner builds. $55,000.

Calif., San Diego—GARAGE—San Diego Electric Ry. Co., Union Bldg., 175x200 ft., brick bus garage, to L. C. Anderson, 3535 Herman Ave., $111,500. Wm. H. Wheeler, 517 Bway. Bldg., archt. CD 1/19—ENR 2/3.

Conn., New Britain—BOILER PLANT—Landers Frary & Clark, 47 Center St., altering boiler plant, separate contracts. $230,000.

Idaho, Boise — FREIGHT TERMINAL — Consolidated Freightways, 314 S. 9 St., 1 story, bsmnt., 92x220 ft., rein.-con. freight terminal, 2 and Broad Sts., to Ertz, Burns & Co., Pittock Block, Portland, Ore. Est. $65,000. Wayland & Fennel, Idaho Bldg., archts.

Mo., St. Louis—SERVICE and SALES—Standard Auto Parts Co., 3200 Locust St., Zone 3, 2 story, 56 x 100 ft. auto parts service and sales bldg., etc., 3200 Locust Rd., to Jacob Rubin & Sons, 602 Wainwright Bldg., 7 and Chestnut Sts., Zone 1. Est. over $40,000 incl. equip. S. L. Rubin, 602 Wainwright Bldg., 7 and Chestnut Sts., Zone 1, archt.

Mo., St. Louis—FACTORY—Stile Craft Mfgrs., 2215 Macklind Ave., Zone 10, 1 story, 100 x 180 ft., rein.-con., brick factory, concrete fdn., 1800 Macklind Ave. Owner builds. Over $40,000 with equip.

N. H. Plymouth—PLANT—Wilder & Kaplan, Plymouth, 400-500 locker capacity, brick, concrete frozen food plant, to Amoskeag Machine Co., Stark St., Manchester. Est. $45,000.

O., Cleveland — FACTORY — Keller-Kohn Co., A. H. Dettlebach, secy., 2230 Superior Ave., altering 5 story factory, to Sam W. Emerson Co., 1836 Euclid Ave. Est. $50,000. C. C. Colman, 1836 Euclid Ave., archt.

O., Toledo — LABORATORY — American Propeller Corp., 1333 Alexis St., 1 story, brick, steel, concrete experimental laboratory addn., to Austin Co., 16112 Euclid Ave., Cleveland, $60,000. CD 9/1—ENR 9/7.

O., Toledo—FACTORY—Textileather Corp., c/o N. Perry, constr. engr., Dayton St., 4 story, 60x80 ft., brick, rein.-con. factory addn., to John Nauman & Sons, Inc., 364 Parker St., Cleveland. Est. $40,000.

Ore., Oregon City—PLANT—Hawley Pulp & Paper Co., Oregon City, log barking plant, to Austin Co., 16112 Euclid Ave., Cleveland, O., $70,500. CD 5/25—ENR 6/1.

Ore., Portland—TERMINAL—Southern Pacific Co., E. E. Mayo, ch. engr., 65 Market St., San Francisco, Calif., remodeling freight terminal at Hoyt and Park Aves., to Waale-Campian, 2100 S.W. Jefferson St. Est. $100,000. CD 6/13—ENR 6/15.

S. C., North Charleston—PLANT—General Asbestos & Rubber Div. of Raybestos Manhattan, North Charleston, addnl. rooms for machinery, to Charleston Constructors, Inc., Tradd St. and Adger's Wharf, Charleston, $47,000. Awarded 9/19.

★Tex., Dallas—STEAM ELECTRIC STATION UNIT—Dallas Power & Light Co., c/o W. G. Moore, vice-pres., Dallas Power & Light Bldg., design and construction Mountain Creek Steam Electric Station addn., incl. 30,000 kw. turbo-generator incl. brick, concrete housing unit, station auxiliaries, etc., to Ebasco Services, Inc., 2 Rector St., New York, N. Y., $2,500,000. CD 8/18—ENR 8/24.

Tex., Dallas—WAREHOUSE, etc.—Southwest Wheel, Inc., 2500 Commerce St., 2 story, 175x204 ft., brick, hollow tile warehouse and office bldg., to Cowdin Bros., 411 S. Haskell St., $125,500. Bids 8/24. CD 8/23—ENR 8/31.

Tex., El Paso—MECHANICAL REPAIR SHOP—The Texas & Pacific Ry. Co., R. J. Gammie, ch. engr., Texas & Pacific Bldg., Dallas, Zone 2, mechanical repair shops bldg., to Rob. E. McKee, 1918 Texas St., approx. $55,000.

Tex., Houston—GARAGE, etc.—Bell-Newlin Truck Lines, Inc., 1005 Panama St., mechanical garage and shop, Hays St. at Chapman, to Bace-Marshall Constr. Co., 4009 Center St., approx. $42,000. H. Moore, 2008 W. Alabama St., engr.

Tex., New Braunfels—MILL—New Braunfels Textile Mills, W. Dilland, vice-pres. and genl. mgr., textile mill addn., to A. Herry, New Braunfels, approx. $48,000. CD 8/23—ENR 8/31.

Tex., San Antonio—ROUNDHOUSE—Southern Pacific Ry. Co., E. E. Mayo, chr. engr., 65 Market St., San Francisco, 5, Calif., roundhouse addn., incl. excav., exten. tracks, new tracks, concrete, brick roundhouse unit, sewer lines, etc., to J. E. Crawford Co., McAllen and Alice, approx. $110,000. CD 9/12—ENR 9/14.

Wis., Sun Prairie—FACTORY—Wisconsin Porcelain Co., Sun Prairie, 1 story, 76x100 ft., rein.-con., steel, factory addn., concrete fdn., to Stegewald Lumber Co., Sun Prairie. CD 8/29—ENR 8/31.

B. C., Vancouver — PLANT — Fletcher's, Limited, 1323 Kingsway, design and construction 1 story, 100x174 ft. meat processing plant, rein.-con., to Dominion Constr. Co., Ltd., 150 W. 1st Ave., about $50,000. Awarded 9/13. CD 8/9—ENR 8/17.

N. B., Saint John—PLANT—Canadian Pacific R. R., J. E. Armstrong, ch. engr., Windsor Sta., Montreal, Que., cold storage plant addn., to Acme Constr. Co., Ltd., 45 Canterbury St., $63,500. CD 8/29—ENR 8/31.

Ont., Chalk River—PLANT—Defense Industries, Ltd., 1135 Beaver Hall Hill, Montreal, Que., plant, to Fraser Brace, Ltd., 360 St. James St. W., Montreal, Que., about $100,000.

Ont., Chatham—PLANT—Hutton & Souter, archts., 36 James St. S., Hamilton, addns., alterations 2 story, 62x82 ft. plant 4, concrete, brick, structural steel, concrete fdn. for Chrysler Corp. of Canada, Ltd., 300 Tecumseh Blvd., East Windsor, to Dinsmore-McIntire, Ltd., 903 Security Bldg., Windsor, about $55,000. CD 8/28—ENR 8/31.

Que., Sawyerville—PLANT—International Cooperage Co. of Canada, Ltd., 989 St. Clair Ave., Niagara Falls, Ont., remodeling plant, day labor. $40,000. J. V. Stagg, Sawyerville, archt. CD 6/23—ENR 6/29.

Que., Shawinigan Falls—PLANT—Shawinigan Water & Power Co., Ltd., Power Bldg., reconstructing plant, day labor. Est. $50,000. CD 5/19—ENR 5/25.

UNCLASSIFIED

PROPOSED WORK

Ark., Arkansas — TRANSMISSION LINES—Arkansas Power & Light Co., Pine Bluff, 72.7 mi. transmission lines, Prairie Co. $56,745.

★Colo., Denver—RAILROAD YARD IMPROVEMENTS—Chicago, Burlington & Quincy R. R., H. R. Clark, ch. engr., 537 W. Jackson Blvd., Chicago, Ill., 110,000 cu. yd. grading, 2 bridges, 111 switches, 397 ft. icing platform, yard office. $500,000.

★†Fla., Boca Raton—AIRFIELD BLDGS. —U. S. Eng., 512 Spring St., Atlanta, Ga., officers' quarters, combination officers' club and mess and school bldgs., Boca Raton Airfield. $585,000.

Iowa—FARM CONNECTIONS—Allamakee Clayton Elec. Coop., Postville, farm connections, Allamakee Co. $125,000.

Iowa—FARM CONNECTIONS—Butler Co. Rural Elec. Coop., Allison, farm connections, Butler Co. $80,000.

Iowa—FARM CONNECTIONS—Lyon Rural Elec. Coop., Rock Rapids, farm connections, Lyon Co. $25,000.

Iowa—FARM CONNECTIONS—Southern Iowa Elec. Coop. Inc., Bloomfield, farm connections, Davis Co. $75,000.

★Ia., Clinton — AIRPORT — City, A. J. Lerche, clk., municipal airport. $500,000. $214,000 available, seeking balance from CAA. B. R. Anderson, city engr. CD 12/28—ENR 12/30.

Ia., Oskaloosa—AIRPORT — City, $90,000 bond election Nov. 4, airport.

Kansas — GAS PIPELINE CARRIER — Cities Service Gas Co., SE of City, Oklahoma City, Okla., soon lets contract 6½ mi. 16 in. natural gas pipeline carrier, connecting 2 big lines. $50,000. CD 9/18—ENR 9/21.

★Louisiana and Tennessee—GAS PIPELINE—Memphis Natural Gas Co., Sterick Bldg., Memphis, Tenn., 235 mi. 16 in. natural gas pipeline carrier between Monroe, La. and Memphis, Tenn. $7,500,000.

Louisiana—FARM CONNECTIONS—Claiborne Elec. Coop. Inc., Homer, farm connections, Claiborne Co. $310,000.

Minnesota—RURAL ELECTRIC LINES—Roseau Electric Cooperative, Inc., Roseau, rural electric lines, Roseau Co., Minn. 97-Roseau. $60,000 REA allot.

UNCLASSIFIED (Proposed Work, Cont'd.)

Minnesota—RURAL ELECTRIC LINES—Southwestern Minnesota Cooperative Electric, Pipestone, rural electric distr. lines, Pipestone Co., etc., Minn. 73-Pipestone. $60,000 REA allot.

Minnesota—RURAL ELECTRIC LINES—Todd-Wadena Power & Light Cooperative Assn., Wadena, rural electric distr. lines, Todd and Wadena Counties. $150,000 REA allot.

★**Montana, Washington** — PIPELINE — North Pacific Pipe Line Co., Billings, Mont., 1,100 mi. pipeline from Montana oil fields to Seattle, Wash., with storage farm of 960,000 bbl. capacity at Renton, Wash. $15,-000,000.

★**New York and Massachusetts**—CABLE FACILITIES, etc.—American Telephone & Telegraph Co., 195 Bway., New York, N. Y., enlarging cable facilities between New York, N. Y. and Boston, Mass., to provide 816 addnl. telephone channels and 2 broad beam program channels. $1,135,000.

N. C., Charlotte—CEMETERY—City, H. H. Baxter, mayor, plans by H. B. Bursley, City Hall, cemetery, 200 acre site, Albemarle Rd. CD 8/22—ENR 8/10.

North Dakota—FARM CONNECTIONS—Tri County Elec. Coop. Inc., Carrington, farm connections, Foster Co. $75,000.

O., Bucyrus — TRACKS — Pennsylvania R. R., J. L. Gressitt, ch. engr., Broad St. Station Bldg., 1617 Pennsylvania Blvd., Phila., 7, Pa., 35,000 ft. tracks for 3 tracks with double-signal sys. and bridges.

O., Lorain—RUNWAY, etc.—National Tube Co., Frick Bldg., Pittsburgh, Pa., runway, facilities to unload coking coal. $112,600.

Oklahoma and Kansas—GAS PIPELINE CARRIER—Cities Service Gas Co., SE of City, Oklahoma City, Okla., soon lets contract 52 mi. 16 in. natural gas pipeline carrier between Shidler, Okla., and Caney, Kan. $225,000. CD 9/15—ENR 9/21.

Oklahoma — FARM CONNECTIONS — Verdigris Valley Elec. Coop., Inc., Collinsville, farm connections, Rogers Co. $50,000.

†**Okla., Fort Sill**—SPRINKLER SYSTEM—U. S. Eng., 231 W. Main St., Denison, Tex., water sprinkler sys. for warehouse and 3 motor repair shops, Serial No. 41-242-45-49. Over $30,000.

Texas—FARM CONNECTIONS—Erath Co. Electric Coop. Assn., Stephenville, farm connections. $70,000.

Texas — FARM CONNECTIONS — McCulloch Co. Elec. Cooperative, Inc., Brady, farm connections, McCulloch Co. $50,000.

Texas—PIPELINE CARRIER—Tennessee Gas & Transmission Co., P. O. Box 2511, Houston, 200 mi. 16- to 20-in. natural gas pipeline carrier exten., Corpus Christi area, $450,000 or more.

Tex., Houston—HANGAR—City, hangar unit. $40,000. CD 1/25—ENR 1/27.

Tex., San Antonio—PARK AND PLAYGROUND—City, community park and playground, incl. grounds development, athletic courts, swimming pool, etc. 20 acre site being purchased in Los Angeles Heights section. Over $50,000.

Tex., San Antonio—PLAYGROUND, etc.—San Antonio Boy's Club, S. Hackberry St., playground and recreation center, incl. grading, drainage, swimming pool, etc. $75,000.

†**Washington** — TRANSMISSION LINE — Bonneville Power Admin., L. C. Stewart, purch. officer, P. O. Box 3537, Portland, Ore., transmission line from Coulee Dam to Blaine.

Wash., Auburn—SWIMMING POOL, etc.—City, City Hall, swimming pool and recreation bldg. $150,000.

Wash., Pasco—SWIMMING POOL—City, City Hall, swimming pool. $36,000.

Wash., Seattle — SPRINKLER SYSTEM — Great Northern Ry. Co., C. N. Nye, ch. engr., 175 E. 4 St., St. Paul, Minn., automatic sprinkler sys. in railroad yards. $80,000.

Puerto Rico—ATHLETIC FACILITIES—Insular Dept. of Interior, Parks Comn., San Juan, plans athletic facilities and playgrounds, at Barranquitas, San Juan, Caguas, Arecibo, Manati, Bayamon, Fajardo, Carolina, Humacao and Rio Piedras. $44,476.

Alta., Calgary — LANDSCAPING, etc. — Municipality, landscaping at Rosedale Subdivision, Park development along hill side and park development at brow of the hill. $30,000.

B. C., Woodfibre—DAM REPAIRS, etc.—B. C. Pulp & Paper Co. Ltd., Woodfibre, repairing dams, penstocks. $35,000. W. A. Bain, Woodfibre, engr.

N. S., Dartmouth — DOCKS AND WHARVES—Dartmouth Ferry Comn., Town Hall, reconstructing ferry docks and wharves. $250,000. O. P. Mac Cullouch, Town Hall, engr.

Ont., Durham — ICE ARENA — Durham Arena Inc., Durham, ice arena. $40,000. Architects c/o J. Grierson, Bentinck.

Ont., Renfrew—BOWLING ALLEY—Renfrew Bowldrome Ltd., c/o J. Campbell Simpson, Renfrew, bowling alley. $40,000.

Que., Arvida—SWIMMING POOLS—Municipality, indoor swimming pools. $30,000. R. A. Lemieux, City Hall, engr.

Que., Dolbeau—CURLING RINK, etc.—Lake St. John Power & Paper Co. Ltd., Sun Life Bldg., Montreal, plans by A. L. Perry, 1502 W. Ste. Catherine St., Montreal, 1 story, 83 x 149 ft., steel truss, wood frame, curling rink, concrete fdn., 2 story, 58x40 ft. club house. $40,000.

Que., St. Simeon—DAM—D'Autreuil Lumber Co. Ltd., 56 St. Peter St., Quebec City, dam. $65,000.

Sask., Prince Albert—SWIMMING POOL, etc.—Municipality, swimming pool and recreational centre. $70,000.

BIDS ASKED

Bids Asked October 4

★†**Md., Patuxent River (br. Wash. D. C.)**—RUNWAY, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., addnl. runway and taxi strip, Naval Air Station, NOY 10621. $560,-000.

Bids Asked October 5

Wisconsin — ELECTRIC DISTRIBUTION SYSTEM—Rock Co. Electric Coop., Janesville, 38.93 mi. electric distr. sys. in Dane, Green Walworth and Rock Counties, REA Proj.—Wis. 3—1038A3—Rock. Plans deposit $5. Wisconsin Electric Coop., 302 E. Wilson St., Madison, engr.

Bids Asked October 9

Tex., Beaumont—HANGAR—Comrs. Jefferson Co., Court House, 140 x 200 ft. steel hangar, and 2 end doors 16 x 100 ft. each. Over $75,000. CD 9/22—ENR 9/30.

†**Va., Hampton**—COMFORT STATIONS—at City Hall, two 1 story comfort stations, one on Wine St., and other, north side Queen St., between Eddie and Court Sts. Va. 44-285. $26,900. FWA. Plans deposit $15. Williams, Colle & Pipino, 408 Melson Bldg., Newport News, archts.

Bids Asked

Mass., Milton—CONVEYOR SYSTEM—Godfrey Fuel Co., 64 Adams St., conveyor sys., fuel terminal.

†**Tex., Denton** — AIRPORT — Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, Zone 1, airport, incl. seeding, excav., drainage sys., fencing, paving. $200,000. Plans deposit $20.

LOW BIDDERS

†**Calif., Benecia**—SPRINKLER SYSTEM, etc.—U. S. Eng., 74 New Montgomery St., San Francisco, installing sprinkler sys. and automatic fire alarm sys., Benicia Arsenal, Spec. 1458-1, from George M. Robinson & Co., 451 Folsom St., San Francisco. $153,352.

†**Colo., Pueblo**—AIRPORT RUNWAYS—Civil Aeronautics Admin., 410 E. 12 St., Kansas City, Mo., Sept. 18, airport runways, etc., from Brown Constr. Co., Box 315, Pueblo, Schedule 2, black top. $61,896. CD 9/8.

†**Md., Aberdeen Proving Ground**—BOMB LOADING BLDG.—U. S. Eng., Standard Oil Bldg., Baltimore, bomb loading bldg., from Leimbach & Williams, 30 W. Biddle St., Baltimore, $66,334.

★**N. Y., Idlewild**—RUNWAY PAVING—Dpt. Marine & Aviation, Pier A, North River, New York, Zone 4, Sept. 21, Contr. 2419, paving Runways A, B and C at Municipal airport, Contr. 7, from A. I. Savin Constr. Co., 10 Village St., East Hartford, Conn., $2,203,945. CD 9/12—ENR 9/14.

N. C., Hamlet—HOSE BOXES, etc.—Seaboard Airline Ry., W. D. Simpson, ch. engr., Seaboard Air Line Ry. Bldg., Norfolk, Va., Sept. 20, hose boxes, pipe and drainage, from John W. Coffey & Son, 400 Glenwood Ave., Raleigh, $35,000.

CONTRACTS AWARDED

†**Ark., Little Rock**—COMBAT TRAINING VILLAGE—U. S. Eng., 200 Bway., training village for combat in cities course at Camp J. T. Robinson, near here, to Horton-Pollard, Bossier City, La., $34,470.

†**Ark., Texarkana**—AIRPORT EROSION CONTROL—Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, 1, Tex., erosion control at airport, incl. grading, check dams, channels, sprigging, sodding, concrete work, etc., to Viking Supply Co., 2330 Summer St., Dallas, Tex., $28,690. Bids 9/16. CD 9/11.

†**California** — GASOLINE FACILITIES — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., gasoline facilities, Naval Air Stations, NOY 9824, to California Constr. Co., 230 California St., San Francisco, $122,250.

★**California**—PIPELINE—The Texas Co., 929 S. Bway., Los Angeles, 60 mi. 10 in. welded steel pipeline from Elk Hills to Cottonwood Pass, to Macco-Robertson Co., 811 Paramount Blvd., Clearwater, approx. $600,000. Owner furnishes pipe.

Calif., Martinez—WHARF and YACHT HARBOR—City Council, City Hall, rehabilitation municipal wharf and yacht harbor, to H. F. Lauritsen, Box 470, Pittsburgh, $32,288. J. J. Walsh, 112 Market St., San Francisco, consult. engr.

†**Calif., Mather Field (br. Sacramento)**—AIR FIELD BLDGS.—U. S. Eng., 1209 8 St., Sacramento, Zone 8, removal and reconstruction existing wooden bldgs., Spec. 955, to Moore & Roberts, 693 Mission St., San Francisco, $71,075.

†**Calif., Van Nuys**—SHOOTING-IN TARGET BUTT, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 15, shooting-in target butt and generator house, Metropolitan Airport, Contr. W-04-353-eng-1011, to J. A. Klarquist, 618 S. Western Ave., Los Angeles, $27,349.

†**Fla., Banana River**—AIR BASE BLDG.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., paint and oil storehouse, Banana River Auxiliary Naval Air Base, NOY 10738, to Paul Smith Constr. Co., 320 Rome Ave., Tampa, Zone 1, $33,541. Awarded 9/13.

†**Fla., Camp Blanding**—TRAINING AIDS—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, training aids, Contr. W-04-121-Eng-536, to W. H. Armston Co., Inc., and A. Krusen, Dunedin, $54,940. Awarded 9/11.

†**Fla., Jacksonville** — PARKING AREA, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., addnl. parking area and warm-up platform, paving roads, drives and parking areas, NAS to GAGS, NOY 10567, to Ivy H. Smith Co., P. O. Box 5098, $144,827.

Ia., Waterloo—AIRPORT DRAINAGE—City, drainage, at airport, to Gjellefalt Const. Co., Forest City, $33,308. Bids 9/1. N. B. Barber, city engr.

Missouri—TRANSMISSION LINES—Farmers Electrical Cooperative, J. S. Hooper, pres., Chillicothe, 154 mi. electrical distr. lines, Caldwell, Carroll, Chariton, Davison, Linn, Livingston and Ray Counties, to Cater Constr. Co., 1016 Baltimore Ave., Kansas City, Mo., $154,900. Bids 9/14. CD 9/6.

†**N. J., Wildwood**—HEATING SYSTEM—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., central heating sys., Naval Air Station, NOY 9728, to Cross Engineering Co., Inc., 235 E. Broad St., Westfield, $107,300.

Pa., Phila.—AIRPORT BLDG.—City, Dpt. P. Wks., City Hall, airport bldg., to Irwin & Leighton, 1505 Race St. $100,000. Awarded 9/15.

†**Pa., Phila.**—ELECTRIC SERVICE FEEDER, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., electric service feeder, NOY 10972, to Philadelphia Electric Co., 1000 Chestnut St., $134,-655; sliding doors, NOY 10701, to Hughes-Foulkrod Co., 809 Schaff Bldg., $41,564, both at Navy Yard.

R. I., Providence—BROADCASTING STATION—WPRO Broadcasting Co., 15 Chestnut St., replacing broadcasting station damaged, incl. 2 Blaw Knox towers, to Hartenstine Zane Co., Inc., 225 Bway., New York, N. Y. Est. $30,000.

†**R. I., Quonset Point**—TAXIWAY—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., taxiway, NOY 10246, to M. A. Gammino Constr. Co., 731 Valley St., Providence, R. I., $42,605. Bids 8/18. CD 8/14.

†**Wash., Shelton**—AIR STATION BLDGS.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., overhaul shop, officer's quarters, Auxiliary Air Station, NOY 10499, to J. B. Warreck Co., 706 Securities Bldg., Seattle, Zone 1, $91,780.

†**Wash., Whidbey Island** (br. Seattle)—MARINE RAILWAY, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., marine railway and boathouse exten., Naval Air Station, NOY 9265, to Western Constr. Co., 604 Arctic Bldg., Seattle, Zone 4. $77,675.

★**W. Va., Charleston**—AIRPORT GRADING, etc.—At offices of County Court of Kanawha Co., C. C. Calvert, pres., Kanawha County Courthouse, grading, drainage, Schedule 2, for Kanawha Airport, to Harrison Constr. Co., 1101 Western Ave., Pittsburgh, Pa., $2,547,830. Est. $2,946,666. Bids 9/19, awarded 9/21. CD 8/29—ENR 8/31.

Wyoming—OIL PIPELINE—Sinclair Refining Co., Sinclair and Casper, 29 mi. 6 and 8 in. pipeline carrier vicinity Casper and Sinclair, to B. Landon, Casper, $186,000. CD 6/1—ENR 6/8.

N. B., Moncton—AIRPORT CLEARING, etc.—Dpt. Transport, Ottawa, Ont., clearing, stumping, grubbing, drainage, smoothing and rolling, hard surfacing airport, to Dexter Const. Co. Ltd., Fairville, about $130,000.

Ont., Malton — AIRPORT — Secy. Dpt. Transport, Ottawa, addnl. airport development, to Armstrong Brothers Co. Ltd., Brampton. Est. about $33,000. Bids 9/14. CD 8/9.

Ont., Windsor—AERODROME GRADING, etc.—Dpt. Transport, Ottawa, grading, drainage, hardsurfacing, bituminous hardsurfacing and surface treating aerodrome, to Sterling Constr. Co. Ltd., Windsor, about $30,000. Bids 8/3. CD 7/27.

Sask., Saskatoon—RIVER BANK BEAUTIFICATION—Municipality, A. Leslie, comr., beautifying river bank from Avenue A to Victoria Park, day labor. $30,000.

Proposed Advertisements see p. 23